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EDITORIALS.

A KING AMONG MEN.

Dr. Prince A. Morrow was well surnamed, and yet not well enough.—For he was assuredly a king among men. Saul-like, he towered above all others; bearded, keen-eyed, his personality was most imposing. Richly-minded, his physicianship was of the highest; his works were through many years and are now known wherever medical science obtains. His great hearted zeal for his race's betterment was untiring; his soul was indeed noble beyond the comprehension of many. He was deemed a prosperous man. Let those who speak of "medical grafter" judge how much of material wealth his altruism and his sympathies brought him; he left an estate of $9,354 to his widow and their children. His superb work "Social Disease and Marriage" brought him royalties for six months of $13.80. As President and founder of the American Society of Sanitary and Moral Prophylaxis he was made, by oral agreement only, trustee of a fund of ten thousand dollars; which fund, by the terms of his will, was surrendered.

This inherent gentle-man made the sins which bring so much woe on human kind the special work of his medical life. An incident typical of his character occurred with relation to an address he made in McCoy Hall, Johns Hopkins University. At the same time there was a convention of woman's clubs in Baltimore; and many of those women went rather unexpectedly to hear him. The physician who was about to present him had previously read his paper and had advised him to modify and to omit some of the statements it contained.

Dr. Morrow invited his presentor to note that on both sides of McCoy Hall there were several exits, besides the usual ones at the back of the hall; and that any one he might offend could almost instantly get beyond the sound of his voice. No woman left, and many afterward came up to thank him for his courageous "revelations."

TWILIGHT.

The day lived out its life in splendid peace content,
The placid, rounded hours in sunny state were spent;
And must this radiant presence grow less bright?
Almost too fair and lofty seemed this day of glow,
Until—a hush, a low sob filled with love and woe—
The day, its soul astir, had met the night.

—*Louise Townsend Nicholl.*

SAVE THE BOY.

We gladly comply with the request of the Rev. Manfred P. Welcher to inform our readers that the Anti-Cigarette League of America will hold a conference on the coming June 2d, 3d and 4th, in The Lake Mohonk Mountain House, New York, and we beg those interested to write Mr. Welcher for information concerning these meetings either at 310 Clermont Avenue, Brooklyn, New York, or at the general headquarters of the League, 1119 Woman's Temple, Chicago, Illinois.

The work to which this League is devoted is indeed vital. The use of tobacco by the adult is not here considered; but we do often have some observations on the use of tobacco by the immature.

More than a decade ago Dr. I. N. Love declared: "The numerous mental wrecks, youths who have come under my care during the last ten years, whose lives were failures, or who fill suicides' graves, impress me that to-day tobacco stands as the gravest danger confronting the new century; and the medical profession has a fearful responsibility in educating young men and their parents to appreciate this danger." Here is a statement as true to-day as when it was written.

Among the baneful effects of nicotine (or the pyridine compounds into which it is converted) are those upon the nervous system, as evidenced by vertigo, tremor, giddiness, leg weariness, pains in various nerve-centres; amnesia, aphasia, psychic aberration, due to spinal or cerebral irritation; and especially such vaso-motor paralyses as cold extremities, pallor, clammy hands and excessive sweating. Burton has found that at first nicotine powerfully increases the blood-pressure and slows the heart; the arterioles are contracted, partly because the vaso-motor centres in the medulla are stimulated, and partly because of the local action upon the arterioles themselves. This slowing is presently followed by the rapid pulse in consequence of the paralysis of the heart ganglia. In both frogs and mammals tobacco produces first convulsions and then paralysis. The symptoms referable to the cardio-vascular system are palpitation, irregular and rapid pulse, precordial pain, oftentimes sharp and severe, and very like angina. The myocardium may become impaired by constant contraction of the coronaries; this and the rise of blood-pressure may lead to arteriosclerosis; a true angina may develop, as also a fatty heart.

Digestion is often impaired; much saliva is, perhaps subconsciously, swallowed by smokers who do not spit, and by chewers of tobacco this occasions nausea, vomiting, flatulence and gastralgia, especially in the neophyte. It is likely also that the gastric secretions are thus diminished, hyperchlorhydria induced, and muscular tone in the digestive tract impaired. "A peculiar susceptibility to the influence of tobacco is shown when a lesion arises in previously healthy epithelium; and this may even induce a cancer at an especially early age; susceptibility to such a malignant growth may play an important part when a chancre, or some sore caused by biting the tongue or cheek, or by the irritation of a tooth, is aggravated by tobacco. Tobacco may affect the nose and throat, either by irritation (especially when the stronger forms are used), or indirectly from dyspepsia or other constitutional disturbances; it should not, however, be blamed entirely for the "relaxed" or "gouty" throat, in the production of which alcohol oftentimes plays a part. Tobacco may, moreover, unfairly be held accountable for a catarrh dependent upon some such well-defined lesion as a suppuration in an accessory sinus. And yet tobacco will often enough aggravate such a lesion, as it will also a pre-existent inflammation of the whole respiratory tract. Asthma is not rare among smokers; the respirations are quickened and deepened, so that dyspnœa is the result. Smoking in an unventilated room is much more injurious than in the open; and non-smokers might as well indulge if they must breathe an atmosphere laden with tobacco fumes. When the

smoke is inhaled much nicotine is absorbed by the sensitive pulmonary surfaces, and thus must be explained the prostration which so often follows upon this practice. Our colleagues who work upon the nose and throat have found that no treatment will avail so long as the patient will persist in the use of tobacco. The "weed" produces, by local irritation, a catarrhal conjunctivitis; or the nicotine, when slowly and continually absorbed from the alimentary tract, may induce amblyopia, either acute or chronic. The acute form has resulted even from the application of tobacco to a hollow tooth; and in a patient who took snuff during ten days to cure a cold. The chronic form occurs in heavy smokers of strong tobacco; dyspepsia, bad feeding, poverty, overwork, worry and insomnia predispose by lowering the nervous resistance to such toxic influences. If amblyopia is to be treated, tobacco must, of course, be entirely withheld; the results are better in the young than in men over fifty. Among other evils ascribed to the misuse of tobacco is impotence. Those who work in tobacco suffer greatly from anæmia, respiratory diseases and digestive disturbances. As we are here concerned mainly with the immature it seems relevant to consider the experiments of Vas upon puppies. By means of this substance he induced anæmia; the hæmoglobin and the red blood corpuscles decreased over one-half; the solid residue and the alkalinity of the blood decreased a little, whilst the leucocytes were decidedly augmented. The use of tobacco has been observed to induce a diminution of the therapeutic effects of medicines, and to retard the healing of wounds. Unquestionably tobacco predisposes to pulmonary tuberculosis, and when diseases of respiration have developed the tobacco habit certainly aggravates them.

The most injurious form of smoking is the cigarette, largely because the fumes are inhaled, and also because of the temptation to smoke many cigarettes; next comes the pipe; the least injurious is the cigar. Tobacco used in chewing and snuffing contains very little nicotine, wherefore poisoning by these means is comparatively rare. Other things being equal, the more excessive the indulgence, the more the smoke is inhaled, and the younger the patient, the more likely are ill effects to be manifested.

Tobacco has its analogue among perhaps every people or tribe that has ever been visited by civilized man. It is one of the "paratriptics," the savings banks of the tissues, which seem to retard tissue waste; such also are the Calabar bean, coca, arsenic, strychnine, cinchona, gentian, Indian hemp, coffee, tea, alcohol. The best reason for saying that these things are beneficent when judiciously used is that the demand for them is imperative and not to be denied—their worldwide prevalence demonstrates that. They are used to tide an exhausted or a misused organism over physical crises. To the beginner in their use the most of them are unpalatable, or even poisonous; and it is not likely they would be taken to any degree were it not that the moderate use of them has, on the whole, been found salutary, or at least necessary. As a paratriptic, tobacco has established itself immovably in the regard of a very large contingent of the race. In the East they say of it that to some there can be no greater blessing; to others no greater curse. We are here, however, as before observed, not concerned with the adult; we but enounce the general principle that the use of tobacco should be debarred the child, the growing lad and the youth (women also—decidedly). For them it is unquestionably deleterious and poisonous; and their bodies, which are fresh and rich in reserve forces, need no stimulant, this or any other. One must surely conclude that a substance which can, when persisted in, so profoundly affect the youthful organism in the ways here indicated, is likely to work destructive and permanent changes in the tissues.

Lady Visitor—"Cheer up, my good man. You know, 'stone walls do not a prison make.'"

"No, indeed, lady. It takes dirt and disease, foul air, rotten food, flogging and torture, thieving officers, and graft higher up—nowadays."—*Life.*

It does not now become a man of science to doubt the possibility of anything.

—*Lord Kelvin.*

"The man of science has learned to believe not by faith, but by verification."

—*Huxley.*

THE GREATER HEALTHFULNESS OF RURAL DISTRICTS.

THE sanitary advantages of country districts over cities are impressively set forth by Dr. Frederick L. Hoffman, the statistician of the Prudential Life Insurance Company. It would seem that in the North Atlantic States, upon which Hoffman bases his observations the only causes of death commoner in the rural districts are typhoid, malaria, influenza, dysentery, apoplexy, paralysis, disease of the heart and peritonitis. Some of these are terminal affections; and regarding them the difference results from a larger proportion of old people among the country population. The most serious difference is the higher mortality from influenza, "which is partly due to needless exposure." Dysentery in the country is perhaps due to neglect; but the mortality difference here is negligible. On the other hand, the diseases more rife in the cities are cancer, alcoholism, meningitis, bronchitis, broncho-pneumonia, lobar and unqualified pneumonia, diarrhœa and enteritis, cirrhosis of the liver, appendicitis, Bright's disease and nephritis, and deaths from violence. Hoffman concludes that in the registration area of the United States (which excludes, however, most of the rural sections of the Western and Southern States) the mortality rate from all causes combined, and from practically all the important causes, is much less in the rural districts than in the cities.

The superior longevity and lower disease liability of the agricultural class is convincingly set forth in the report (quoted by Hoffman) of the Registrar-General for England and Wales. The death rates are not only below the standard for all occupied and retired males; they are also generally below the rates among all males in the selected healthful districts (except among farmers and their laborers above sixty-five years). Within the main working period of life the comparative mortality figures for the agricultural class is 40 per cent below the average for occupied and retired males; and the mortality from alcoholism and liver diseases, from phthisis and respiratory diseases, is less than one-half, and from Bright's disease about one-half the standard. From all other causes except influenza from which the mortality is normal) the death rates are also below the average.

Of course it were a work of supererogation to seek to deter those, however unfit, who are bent upon abandoning their country homes for the stress and turmoil and tragedy of city life, those so oftentimes doomed thus to failure in their ambitions, to starvation and suffering in hideously insanitary tenements and to pathetically untimely deaths; there is scarcely an argument that has ever appealed to those thus determined to prefer the madding crowd to the ineffable peace and wholesomeness of the country, its natural living, and its wholesome sunshine and air, its fields and placid waters. Many go cityward because they dread the monotony of country life. But country life has vastly changed within a generation, indeed within a decade past. "There are hundreds of charming villages from Maine to California which can offer laborers and small farmers almost as many pleasures and social advantages as the large cities can." The telephone, the various self-playing musical instruments, the village libraries, the cheap (and good) magazines, the clubs, the state and county fairs, the mail order system, the rural free delivery and the like have left no one any excuse to complain of monotony in the country. And as to those "social advantages"; are there any superior in the city? Well, hardly!

Even yet a June-bug gives me a thrill, and the grip of his horny legs on my finger will set my associative memory working as will few things else. For me he is a living question, a puzzle, a hard little lump of primeval nature. Above all, he is a scarab. Around his foolish head lingers a glory visible only to the mind's eye, but made up of vestiges of Karnak and Thebes, of Isis and Orus and the dog Anubis.—*Robert M. Gay, The Atlantic Monthly.*

ANNOUNCEMENT.

THE LEISURE HOUR is omitted from this issue by reason of the unusual space devoted to RURAL SANITATION. With the June number our Leisure Hour Department will be "reshumed," as Private Mulvaney would say. In our June number Hot Weather Hygiene will be "featured."

We have arranged to print the superb series of popular lectures delivered the season now passing by the physicians of the Lebanon Hospital in the Bronx, New York, under the auspices of the Social Service Department of that institution. The first of these papers by that master-surgeon, Dr. Parker Syms, will appear in our June issue. And papers by Dr. William S. Gottheil, Dr. Percy Fridenberg, Dr. Ralph Waldo, Dr. Charles Herrmann and others will follow in due course. The coming fall the whole notable series will be handsomely reprinted together.

ALPHONSE BERTILLON.

ALPHONSE BERTILLON who did most to elaborate the science of anthropometry, from which he evolved in 1879 a system of criminal identification died February 13th last. By his work the records of municipal police departments were improved far beyond those of their courts. The police of great cities regularly discharge exchange the Bertillon measurements of convicted men; and can thus recognize of national and oftentimes of international disrepute. Bertillon was himself for thirty years the head of the Paris Bureau of Identification.

This remarkable man has been considered the inventor of the finger print method of identification; but erroneously. When Mr. Wm. A. Pinkerton was in China he found that the merchants impress their thumbs rather than write their signatures on documents and business agreements and have ever with them for this purpose a cake of ink. And this it seems, has been the case for centuries, from time immemorial, indeed. From China the use of the thumb print spread to India, whence the English introduced it to London. Francis Galton published his Finger Prints in 1892 and soon after his Index of Finger Prints. He computed that the chance of a finger print of an individual being duplicated by that of another is one in sixty-five billions. And it was he who first proposed reduced finger printing to a system, and who proposed it to Bertillon. The latter was for a long time skeptical as to its utility, preferring his own system of measurements.

It was one of the most pitiful incidents of the Dreyfus trial that Bertillon who had written several works on identification through having been called on as an expert, gave an opinion which went far toward sending that most unfortunate soldier to Devil's Island. The question of the guilt of treason of Dreyfus hinged on the identification of letters written by him with that of the infamous bordereau. Both concluded that the bordereau and these letters to have been written by the one person; and he so testified, as one of three experts engaged state, two of whom declared against Dreyfus, the third maintaining that the soldier had had nothing to do with the bordereau. With the latter two experts engaged by the defense coincided. The verdict at that trial doomed Dreyfus to imprisonment for life in the pestilent tropics. Five years after, through the efforts of Zola, Picquart and others he was returned to Paris, where his case was reversed in the manner all the world is now familiar with.

THE PROLONGATION OF LIFE.

From a recent bulletin of the city health board we learn that the suggestion of Dr. Herman Biggs that every individual past middle age should place himself under observation of a competent physician, by whom he should be inspected regularly for the early discovery of degenerative diseases, has borne good fruit. It is a well known fact that these diseases arising from the wear and tear of modern life are rarely discovered before they have become irremediable, and that often a life insurance or other accidental examination reveals the un-suspected presence of signs pointing to early development of such maladies. These facts have led to a unique combination of men of science, philanthropy and business who have organized a life extension institute, which offers to the public facilities for regular examinations by trained physicians under the supervision of scientific men in various departments at stated intervals.

Some life insurance companies have already adopted this plan for their clients because it prolongs life and therefore premium paying. The life extension institute, however, is chiefly philanthropic, for although a moderate fee is charged the income is chiefly expended for improving the beneficent service and extending it to all classes. The fact that the board of directors is formed of men whose lives have been dedicated to public welfare and others noted for business capacity of the highest order, and that at their head stands ex-President Taft, guarantees the lofty aims and integrity of its purposes. The efficiency of the beneficent work planned is insured by the men who form the hygiene reference board, at the head of which stands Professor Irving Fisher. The various divisions on public health administration, medical practice, chemistry, pathology, physical education, occupational diseases and others, which contain names that are synonymous with human welfare, augur successful administration. These gentlemen serve without compensation in the "work of human salvage."

The application of scientific efficiency to the prolongation of life by limiting the deadly habit of waiting until disease becomes irremediable is one of the most beneficent movements of very recent times.

Every individual, in whatever station of life, will derive advantage in saving of life and maintenance and working capacity from these periodical systematic inspections by experts and their counsels with regard to diet, exercise and other hygienic measures, which are most fruitful in the prolongation of life even after diseases like Bright's, heart affections, diabetes and others incident to advancing years are established. Their early detection in younger persons may prevent their development in the majority of cases. The trivial cost of these inspections precludes neglect by reason of limited finances, while the profitable outcome is obvious.—*The N. Y. Sun.*

THE LAND OF BEGINNING AGAIN.

I wish there were some wonderful place
  Called the Land of Beginning Again,
Where all our mistakes and all our heart-
    aches
  And all our poor, selfish grief
Could be dropped like a shabby old coat at
    the door,
  And never put on again.

I wish we would come on it all unawares,
  Like the hunter who finds a lost trail;
And I wish that the one whom our blindness
    had done
  The greatest injustice of all
Could be at the gates like an old friend that
    waits
  For the comrade he's gladdest to call.

—*Booth Tarkington.*

ORIGINAL ARTICLES.

THE THERAPEUTIC VALUE OF FOOD IN DISEASE.—A GENERALIZED BIOCHEMIC STUDY OF NUTRITION.

By Theodore William Schaefer, M.D., Kansas City, Mo.

L'evolution, c'est l'ensemble constant deces alternatives de la nutrition; c'est la nutrition considerée dans sa réalité, embrassée d'un coup d'oeil à travers le temps.—Claude Bernard.

The purpose of this article, from a purely therapeutic standpoint, is to encourage the medical practitioner along a line of inquiry pertaining to a subject to which very little attention has been devoted in the past. The aim is to encourage research or at least stimulate a desire for further information in regard to the therapeutic value of food in disease, instead of the customary one of viewing the nutritive value of food materials solely from the standpoint of digestion.

In pursuing a toilsome search through lengthy text-books the physician will find, when making an examination, that practically very little has been written that is of any importance on the subject of the therapeutic value of foods. It is, indeed, one of the most neglected subjects of medicine and surgery. This should not be so.

This is a new domain of therapeutics. Experimental researches on this question are most urgently needed, but they are not provided for either in the biochemical or physiological laboratories of our universities. In regard to food, man frequently follows a very blind instinct—his appetite, which is not a true guide in such matters, not being based upon any fixed physiological laws whatsoever.

It is rather paradoxical that something which so intimately engages the attention of mankind, like food and drink, has been so late in becoming an object of research. Possibly the prevailing belief that is sanctioned by time that there exists in man something higher than his corporeal existence that is not dependent upon food and drink. Another may be in the fact of the general inclination of man to investigate distant objects, instead of those that are near him which he naturally neglects. Because of the peculiar construction of the primitive man's mind, his attention has been attracted toward natural objects, such as plants and animals, instead of toward himself. Only when he became hungry and sick did his own welfare receive any consideration. The progress in the domain of the chemistry of foods can only be accurately followed and judged by one who is well informed in regard to those chemical constituents that occur in food proper, food luxuries, stimulants, accessories, condiments, flavors, etc. One who has gained information of the chemical, physiological and therapeutical importance of food obtains a deeper insight in this line of study than one who is not so prepared. The study of the therapeutic indications of food would be an ideal goal for the scientific physician in the successful treatment of certain diseases. He would find a specific medication, theoretically speaking, in the so-called specific values of the articles of nutrition or aliments. The belief is now slowly gaining ground that certain diseases can be successfully treated by the administration of properly selected and prepared articles of diet which have a distinctively active or medicinal influence over certain pathologic conditions.

This brings us to the study of trophotherapy which is the science that deals with the treatment of disease with food. Trophodynamics deals with the science of the powers and effects of foods. Trophology is the science of the nature and properties

of materials that are used as food. As our knowledge of the pathogenesis of a large number of diseases is imperfect, we are not in a position to lay down definite rules at present for the treatment and cure of disorders that are due to a constitutional, nutritional nature, except in a very limited number of diseases. In view of what has been accomplished by means of diet in scorbutus one is led by considerations of this kind to look forward with hopeful anticipation to the time when a science of experimental or physiological dietetics would assume a definite and recognizable form. The subject of the treatment of certain diseases by means of diet would certainly be an ideal one. The growing importance of food in both health and disease and the great attention that has been given in recent years to the subject of diet should certainly lead us to successful endeavor in this particular direction. Heretofore experimental researches in regard to food and diet have been conducted solely with a view pertaining to the nutritive value of food material and the requisite quantities for supporting and maintaining life in all its phases and activities. It is evident that certain kinds of food that are effective in promoting constructive tissue metamorphosis should also possess certain specific properties as is the case with certain proteid bodies, like the antitoxins, serums and alexins in disease. Reasoning along these lines we find that a certain variety of food contains ingredients of a nature that have a special selective and constructive affinity for various tissues and fluids of the body. The bodily framework, organs and other parts need a continual upbuilding and renovation. Some foods possess certain reconstructive ingredients that go to supply the tegumentary, bony and other structural parts of the body. The skin, the hair, nails, teeth and other structures of the body receive their corresponding supply of material from the ingested food. With the organic food material the organism receives a supply of potential energy which is converted into living force in the body. The mineral elements of our daily food are principally concerned in the great life processes of osmosis and diffusion.

Besides the articles of food which we partake of at every meal there are a large number of other substances taken internally at the same time, although not intended to cover the daily loss in bodily substance, yet serve in making the food more savory and palatable as well as digestible. They exert a beneficial influence upon the activity of digestion and the nerves, and occasion an increased utilization of the food in the stomach and bowels. After passing into the blood they stimulate the central nervous system and assist and increase the other functional activities of the body. (Dr. J. König, Diemenschlichen Nahrungs-und Genussmittel, Zweiter Band, 1904, p. 208.)

That the alkaloid containing articles of food luxuries are of great influence upon our nutrition, although they do not furnish but little or no real nutritive substances to the organism, is a daily observation and a recognized fact that is admitted by all observers. A cup of coffee or tea, partaken of after a great exertion, as well as a glass of wine, are capable for the time being to remove the sense of lassitude, a pipe of tobacco or a cigar permits us to forget for a moment the strong sense of hunger and arouse a feeling of comfort or ease, which is indeed a satisfaction to us. They increase the bodily capacity for work and dispel a feeling of weakness of the nerves and muscles occasioned by work or illness. In order to overcome the increased effort of exertion after partaking of a rich meal, which is essential for the digestion of food, we are accustomed to drink a glass of wine, beer or a cupful of coffee or tea or smoke a cigar to thus better prepare the body for other work. With respect to the *modus operandi* of these alkaloidal articles of food luxuries upon the metabolism of the tissues the most diverse and conflicting opinions prevail, into the discussion of which we cannot here enter. Coffee and tea have no positively proved action on the exchange of material, and their importance lies chiefly in their action upon the nervous system.

As there are certain foods that possess in a most characteristic degree properties that act admirably upon the nervous system there are others that possess physiological activities of a marked character, stimulating as they do the circulatory system, with the consequent increase of saliva, gastric juice and other digestive juices, eminently promoting digestion. Some possess a direct effect upon the kidneys, while others increase the alvine evacuations. Among the so-called medicinal foods there are some excellent appetizers, which are both tonic and nutritious.

Among the accessory articles of diet are the condiments and flavors, whose nutritive value is of a special character. They have a

directly beneficial effect upon the processes of digestion by promoting the secretion of saliva, gastric juice, etc., in addition to the important fact that they increase the palatableness of food, hence increase the desire for food. With reference to the condiments, Brandl (Zeitschrift für Biologie, 1892, vol. 29, p. 277) has shown that mustard and pepper also markedly increase the absorption of soluble products from the stomach.

The writer of these lines believes that the effect of the condiments on the organism of man is (through the senses of smell and taste) primarily a psychical one. Secondarily, when applied directly to the sensitive mucosa they occasion an irritation of the end fibrils of the nerves of the salivary and gastric mucosa with consequent sensation of increase of appetite. He believes that the introduction of aromatic substances in the form of spices must serve a purpose. There is certainly a reason why the Southerner and the dweller of the tropics instinctively add spices to their food. Most of the aromatic substances found in the various spices and condiments are aromatic bodies possessing antiseptic virtues. Introduced into the intestinal tract they act more or less as antiseptics. Most of the numerous aromatic substances which are converted into benzoic acid in the body are voided as hippuric acid in the human urine.

Fanciful theories have been constructed on the imaginary medicinal virtues of certain kinds of foods, as, for instance, some foods are supposed to display characteristics that are distinctly aphrodisiac, etc. It is indeed strange that since the origin of medicine the actual number of articles of food that are supposed to possess specific or therapeutic properties have been comparatively small indeed. It is a fact that the therapeutics of nutrition has not kept step with the progress of medical science. The paucity of exact observations in this direction is indeed very striking.

(*To be continued*)

CLEAN MILK.

By Charles Cristadoro, Pt. Loma, Cal.

Theoretically, cows' milk, from a tuberculin-tested cow, that is also free from udder disorders of any kind, should reach the breakfast table of the consumer, or the nursery, germ-free, at least, noxious germ-free. The calf, closing its lips upon the teat of its mother, so gets its milk free from any contaminating influence. Could cow's milk be directly transferred to a hermetically sealed and sterilized bottle, uncontaminated even by the air of the stable, the milk supply of a city would be above reproach.

Milk, is of all foods for the human, the most helpless in a sanitary sense, and yet no food that comes upon our tables is so easily affected by handling, exposure and environment as is cow's milk. In a germ sense it is the best culture medium known. We can protect ourselves by washing our fruit and vegetables as well as our meats, and then, in a germ protection sense, make assurance doubly sure by boiling and baking. Even our bread, despite the pre-oven bacteria gamut run by it, comes fresh from the oven sterilized, as far as noxious pathogenic germs are concerned. But we can not wash our milk, neither can we boil it,—for infant feeding, nor can we bake it, in common usage as a potable milk.

An unwrapped, exposed and germ-infected loaf of bread can be made pathogenic germ free by placing it in a hot oven for ten or fifteen minutes, thus guarding against the unsanitary hiatus between the oven and the table.

Like the poor, germs, good and bad, are always with us, in fact human life itself is dependent upon germ life.

To begin with, as to milk, the cow must be healthy. A tuberculous cow or one suffering from inflammatory disorders of the udder, not always detectable, means infected milk. A perfectly healthy cow will, at times, void virulent tuberculosis germ-laden excreta, and these despite all precautions sanitary, do now and then get

into the milk. In fact, of the sediment found in unsanitary milk, 90 per cent. of same will be found, on examination, to be cow's manure.

So given a perfectly healthy cow, the milk, because of its phenomenal susceptibility to germ infection, needs safeguarding from every direction.

The advent of certified milk has proven a god-send to the milk situation in the widespread influence along the line of barn sanitation and cleanly manipulation exerted. But only a very small fraction of the milk supply of the land is made under and within a "certified" environment.

Even, with the most commendable sanitary care given certified milk, it is yet unsafe, even dangerous in a pathogenic germ sense, at times, because of unsuspected and undetected udder disorders. Dr. Rosenau, whose efforts have been so beneficent and far-reaching along the lines of clean milk, advocates the pasteurization of certified milk during the season when infectious sore throat (streptococci germs) is at hand.

To illustrate.—A succession of infectious sore throat cases appearing along the line of a milkman's route, the Board of Health inspected the stables and cows and found no cause whatsoever to criticise either the sanitary environment of the stables, the methods of manipulation of the milk or the health of the cows themselves. On the face of it, the dairy was above reproach—yet along the milkman's route and nowhere else was the sore throat infection rampant.

Each cow was tagged, and a separate milking made in each case into sterilized pails, and the milking from each cow at once passed through a milk clarifying machine, the deposit thrown down removed at once for microscopic examination and the machine sterilized before another clarification was made. In two cases slimes were detected in the deposits separated from the milk of two animals. A microscopic examination disclosed the presence of streptococci germs. These two cows were removed from the dairy, the balance of the milk was served upon the route and not a new case of infectious sore throat appeared. The spread of the epidemic ceased. And this milk came from a dairy where everything was so sanitary that the Board of Health inspectors found nothing whatever to criticise. The trouble came, as indicated above, from unsuspected and undetected udder disorders. So much for the absolutely sanitary dairy, but how about the ordinary, commercial dairy, good, bad, indifferent and—filthy?

Take a stable only "near sanitary," and not very near at that, cows by no means above suspicion; unsanitary milking and handling methods, and far from sanitary utensils; unscreened stables and milk-room and the typhoid-and-other-fevers-fly freely present, what is to be done in such cases? And it is not too much to state that the great bulk of the milk of the United States, and Europe as well, is made under such conditions. The 100 per cent. sanitary dairy is so rare that we must remark about it and illustrate it and write it up in the magazines, to encourage the others.

As to dirty, germ-laden sediment-showing milk we are up against a general condition and not a theory, and the question is a burning one, a world-wide dietetic problem. They have cut the Gordian unsanitary lacteal knot, as far as the City of Paris is concerned, the home of Pasteur that was and Metchnikoff that is, by applying compulsory pasteurization, if I am not mistaken, 185° F. for 15 minutes.

A scientist made an estimate of the manure sediment in the daily milk of Paris and his figures were appalling. This same situation holds, as far as dirty milk is concerned, in the case of every dairy in the land where "certified" milk sanitation is not only disregarded but where shiftlessness and unsanitary conditions hold.

Of course, the milk of Paris and every city in the broad land, should *not* demand

pasteurization to make it safe, if not clean, for human consumption. The milk *should* start from any and all dairies germ-free, and, of course, sediment-free, *but it does not.* So what are we to do, wait until all dairies in the country are made sanitary, along certified milk restrictions, and give up the drinking of milk and feed our infants upon "some other food" meanwhile, or what are we to do?

Paris pasteurizes her filthy manure-laden milk. The law steps in between the dairy and the home of the consumer as a sort of germ guardian angel. But the milk of Paris, although pasteurized and pathogenic germ-free and safe, but it is yet dirty milk, only the manure has been made safe in a germ sense by "cooking." You can take a piece of putrid meat and by either boiling or thorough roasting make it "fit and safe to eat," in a germ-free sense. And so with dirty, unclarified milk, that has been pasteurized.

Why not first, by mechanical means at hand and easily and instantly applied, pass the milk directly, fresh and warm from the stable, at once through the clarifying machine and throw down and out every particle of manure, dust, hairs, blood, slimes and all else, that, to a greater or lesser degree at some time, get into milk, all milk, even to the most certified of milks.

Metchnikoff, the champion of pasteurized milk, holds that all milk (he makes no exceptions) demands machine clarification. Now, if Metchnikoff be right, and it is conceded that, on milk, he is the foremost authority of the day, why not, if we must pasteurize our milk, 145° F. for 30 minutes, start with mechanically cleaned milk at least? Why cook the manure and other abominations found in the sediment of milk? We don't eliminate physical dirt from milk, even if we do make it pathogenic germ-safe, by pasteurization.

After a study of this clarified and pasteurized milk subject, extending over a period of 30 years, I hold as follows, and will continue so to hold until the day arrives when milk from absolutely healthy cows can be transferred to our tables as uncontaminated as it passes down the oesophogus of the feeding calf, viz., that all milk, to make it safe and clean at all times, even certified milk, should be treated as follows: As soon as the milk-pail is brought into the milk-room its contents should be passed at once through a milk clarifying machine; then filled at once, with the animal heat yet in the milk, straight into sterilized and hermetically sealed bottles; then heated up to 145° F. for 30 minutes; then cooled down to 45° F. and, properly iced and shipped to town for consumption. Under such a procedure we can safely wait for the shiftless and careless dairyman to mend his unsanitary ways.

Illustrative of germ infection. Sterilized water is passed over a sterilized milk-cooler. We microscopically examine the water and find a presence of germ life, 5,000 to 10,000 bacteria to the c. c.

We take a pint of sterile milk, allow a fly to drop in it; and, if the milk be exposed to a temperature of 70°, in 24 hours the microscope will show a phenomenal bacterial presence. How many flies are strained from a milk pail or from milk cans is only to be conjectured where screens for stables and milk rooms are wanting.

There's method, *most sanitary,* in the removal AT ONCE of the "foreign matters" that get in the milk-pail, instead of allowing it to prove, during the 24 hours, more or less, en route to the market, a source of millions of germs. Certainly the instant removal of the filth from the milk before it has time to create germ havoc through solution is desirable and commendable. The ideal milk of the future therefore, I predict, is to be from healthy cows, in a sanitary environment, sanitary handling, instantaneous clarification, at once after milking, followed by bottling and pasteurization, then cooling down to 45° F. When that millennium arrives the world will have at last secured not only clean milk but safe milk.

Machine clarification will remove the physical dirt and slimes from milk but it will not remove, can not possibly remove, the latent *germ influence* of the foreign matters in the milk. The act of pasteurization does that. And as to pasteurization we have yet to read a paper by a physician, showing that pasteurization, 145° F. for 30 minutes, *in any manner* militates against the food value or digestibility of milk, the said paper to be based upon a protracted and thoroughly practical investigation.

WATER.

By D. L. Field, M.D., Jeffersonville, Ind.

In the Creation, God made everything necessary for man, and beast, before he created them; and one thing he made, indispensable to maintain the health of the animal and vegetable world, was water! Pure water is a life saver, and impure water is a life-destroyer.

The health giving properties of water, are eloquently described by the late John B. Gough: "Where is the drink that the 'Eternal' brews for all His Children? Not in the simmering still, does God prepare this precious essence of life,—the pure water; but in the green glade, and grassy dell; and low down in the lowest valleys, where the fountains murmur, and the hills sing; where the naked granite glitters like gold, in the sun; where the storm-clouds brood, and the thunder storms crash; and away far out on the wide, wild sea, where the hurricanes howl music, and the big waves roar,—the chorus sweeping the march of God,—there he brews it—that beverage of life, and health-giving water.

Everywhere it is a thing of beauty; gleaming in the dew-drop; singing in the summer rain; shining in the ice-gem, till the leaves all seem to turn to living jewels; spreading a golden veil over the setting sun; and a white gauze around the midnight moon. Sporting in the cataract; sleeping in the glacier; dancing in the hail shower; folding its bright snow-curtains softly about the wintry world; and waving the many-colored iris, that seraphs' zone of the sky, whose warp is the rain-drop; whose woof is the sunbeam of heaven, all checkered over with celestial flowers, by the mystic hand of refraction. Still, always it is beautiful,—that life-giving water."

All Gough says is true of pure water, i.e., uncontaminated; but it is too often made impure.

When it is impure, it contains the germs of disease, and death. There can be such a situation, where there may be "water, water, everywhere; and not a drop to drink,"—that is, unfit to drink.

Healthful water can be obtained only from the clouds, by careful gathering, careful cleansing, and preserving. Water is a solvent of many substances, and is easily contaminated by impurities, and can by care be as pure as that found in the chemist's laboratory. It is distributed by nature; evaporated from the earth, and the ocean, and drifts in mists up to where the cool air condenses it into clouds; but in the process, it is charged with ammonia, and particles of matter that float upon the winds. Nothing is more easily soiled by impurities. It is the great carrier of morbific elements, and nutriments to build up animal and vegetable life. It is life's greatest blessing, and its greatest pest. Pure, it is life: polluted and foul, it is death. It has been proven, that a very large proportion of the most deadly disease-producing elements are conveyed into the system by water. It is the prolific cause of typhoids, malaria, and is the nursery of some forms of contagion. When the air is charged with humidity, or dwellings are damp, it tends to produce, or aggravate many forms of the most fatal maladies in the catalogue of human ills. It plays so important a part in all of life's relations, that we cannot be too earnest in our efforts to keep it pure!

MISTUH SKEETER.

Go 'way there, Mr. Skeeter! Don't you sing dat song to me.
I's hyud about yoh doin's; you's es tough as you kin be.
You's ben aroun' a-lunchin' on malaria an' things
Till you's jes' about as danjus as a rattlesnake wif wings.

I didn' use to min' you when you come a-browsin' roun',
Ca'se I know'd a slap 'ud send you tumblin' senseless to de groun'.
But since I hyud dem white folks I's as skyart as I kin be.
Go 'way, Mistuh Skeeter! Don't you sing dat song to me.

—*Washington Star.*

SALT.

By H. O. Beeson, M. D., San Bernardino, California.

Here are a few facts about salt.

It is true that salt added to food gives it a more palatable taste to those who have cultivated the habit.

But to those who have not become accustomed to it with food it is highly distasteful. The taste is strictly an acquired one. In the early day, when the wild Indian roamed the western plains, the Sioux tribe lived near Omaha. They made regular excursions to the settlements near that city. My mother was frequently called upon by the visiting bands to contribute to their gastronomic wants. She would spread some slices of bread with butter for them, which they invariably took out to the fence and wiped the butter off. They did not like the butter because of the salt. The American Indian did not, as a rule, use salt with his food. A few tribes, living on the lower Mississippi and in old Mexico, cultivated grain, but the balance of the American Indians lived by the chase and invariably ate their meat without salt.

Prescott, in his history of Mexico, relates the instance of the tribe of Tlascalans, with whom he made an alliance, and by their aid was enabled to establish himself in that country, in which he states that they had been imprisoned on a high mountain plateau for fifty years by the allied tribes about them, during which time they had not been allowed to visit the low lands to procure salt, and that after fifty years of salt deprivation, he found them strong, courageous and enduring.

There are many tribes of people in the world that make no regular use of salt with food. Bunge explains that the proportion of the potash salts in the food determines the demand for salt. Foods containing these salts in greater amount than the system requires create a craving for salt which neutralizes the potash and removes it from the body.

Be this as it may, there is abundant evidence to show that the craving for salt is often more fancied than real.

The stock argument about the wild animals seeking salt is also largely taken without consideration. To the best of my knowledge and belief there is not a wild animal in existence that takes salt with its food. A few of them will seek the salt licks, but this they invariably do in the intervals of digestion. And in licking salty earth they surely get but little.

They certainly do not get the amount our teachers tell us is necessary for their maintenance of health. In England it is customary to raise cattle without salt, or at the most, they do not give nearly the quantity we give in America.

Foods contain salt (normal organic) in varying proportions rarely more than one half of one per cent. Marine fish usually contains one to one and one half per cent. Mammals about one half per cent. Vegetables are poor in salt, rarely exceeding two tenths of one per cent.

Human blood contains four-tenths to five-tenths of one per cent. The same is true of the tissue serum. The cells contain no sodium chlorid. They will not take it. They will give up some of their water to dilute a pabulum of greater saline density than their own. This shrinkage becomes fatal when the osmotic density exceeds nine-tenths of one per cent.

Mucus ordinarily contains 10 to 12 parts per thousand of salt in salt users. What it contains in non-salt-users we know not, for all examinations have been made on salt users.

Nothing is more certain than that the law of osmosis is as immutable as the law of gravity or that of the diffusion of gases. So, when two solutions of different densities are placed upon opposite sides of an animal membrane there will be an equalization of the two fluids in osmotic pressure. Hence, if the mucous coating contains 10 to 12 parts per M there will inevitably be

an outward flow of serum to dilute the offending density. Likewise, if the alimentary contents contain a greater proportion of salt than the blood there will be an exosmosis, filling the digestive tract with a fluid that is not digestive. This outward flow of serum occurring at the time when the secretory glands should be the most active, and being derived from the blood supply that furnishes them with material from which to make secretions, necessarily inhibits the production of digestive secretions and in proportion inhibits digestion. No physiological truth can be plainer than this.

The amount of salt that can be used without producing harm can not be determined by the sense of taste alone. It must conform to the physiological needs and must not exceed the limits of cell integrity. A cell cannot exist in a solution of greater osmotic density than nine parts per thousand, for beyond that it will give up some of its water and shrink, and thereby becomes incapable of performing its functions.

What is our consumption of salt per capita per diem? I have been unable to find in medical literature any statement of the average amount used by the American people. Charles Achard states that the average consumption of the French people is 20 grams. That makes 300 grains. Our War office gives the daily ration to the United States soldier as 16-25 of an ounce. If I am not mistaken that makes 307 grains. The soldier's ration of food is 35 ounces. This is a proportion of 1 to 55 or 18 to 1000. We may take it as the best criterion of the amount used by the American people from which the American soldier is derived. 300 grains weighed out fills a tablespoon heaped up. That is what we use daily. This is the result of being guided by the taste alone, giving no consideration to the physiological needs of the body or of the evil effects of the increased osmotic tension upon digestion and nutrition.

All physiologists agree that 95 per cent. of the salt ingested is eliminated unchanged within twenty-four hours. Then, of the 300 grains eaten daily by the average American, 285 grains are cast out of the body as foreign material as rapidly as the emunctories can accomplish the work. And who is there to say that this can be carried on for years without harm? The history of salt using nations proves beyond question that something is transpiring to make them the unhealthiest animals in existence. Such daily repeated glandular exhaustion by exosmosis would logically, and practically does, produce the very condition of glandular torpidity that afflicts civilized mankind.

I am not unmindful of the role of salt in keeping the colloids in solution, but that fact can not be used to justify the intemperate use of this condiment. Bunge and other observers of his class testify that 15 to 30 grains daily are sufficient to meet all of the demands of nutrition. That statement conforms to well established physiological facts and agrees with the proportion found in the fluids.

That osmosis, or otherwise called diffusion, is one of the most potent factors in cell activity can not be questioned. That, and chemic action, are the two fundamental factors in the taking on of nutrient materials and the discharge of effete matter or waste. Without these two factors in the activating of cells, there could be no special, zymotic or innervation influences. With these two factors right, all other factors would be right; with these two factors wrong, all other factors would be wrong. Hence, what is more important than keeping osmotic and chemic equilibrium normal?

Yet a search of the medical literature will reveal an almost entire absence of consideration of these matters. And very recently a book writer of Philadelphia in replying to a letter of mine stated that he did not consider these matters as fundamental. If the interchanges of chemical substances constantly taking place in all nutritive processes and the force of diffusion actuating them are not fundamental I wonder what is an essential force in nutrition.

The use of an excessive amount of salt with food causes:

1. Inhibition of the production of digestive secretions.
2. Consequent retardation of digestion.
3. Favors the growth of saprophites by reason of delay in digestion, with consequent slight but persistent ptomain toxemia.
4. Retards absorption, hence interferes with the prompt removal of the products of digestion. "Saline solutions are absorbed in a ratio inverse to their density."
5. Being eliminated in large part by the mucous membranes, the exosmosis produced causes exhaustion and final infection, and the foundation of chronic catarrh is laid.
6. The daily extra work put upon the emunctories in eliminating the surplus and the evil effects of the hypertonic osmotic tension on the cells results in general gland-

ular insufficiencies and final degeneration.

7. The hypertonic osmotic tension of the blood serum exhausts the red cells of their water and makes them poorer oxygen carriers, thereby inhibiting metabolic processes and the oxidation and elimination of bodily waste.

8. The bodily distresses caused by these disturbances of metabolism and elimination, and the demand for diluent due to the presence of an undue amount of this highly osmotic agent, together with the mucous membrane excitation caused by the excess of sodium chlorid in the mucus bathing them, are the foundation of the drink evil and the sexual perversions. If not the chief cause they are certainly important ones.

9. A sufficient amount of salt to be used daily is 15 to 30 grains to meet all of the demands of nutrition and any in excess of this is not only useless but distinctly detrimental.

CONTAMINATED FOOD.

By A. E. Bear, Camden, N. J.

The "Pure Food and Drug" laws take care of the ingredients going to make up the food stuffs that we eat and the medicines we swallow. Now it needs another law to protect us from the germs which, after floating round in the atmosphere, settle upon and breed in the food exposed for sale. All the care lavished upon the meat, and other viands previous to their being stamped "pure" by the Government will not prevent their carrying diphtheria or some other loathsome disease into an innocent household if it is exposed on a counter where dozens, yes hundreds of people's coat sleeves knock against or drag over it, and the breaths of those hundreds of all classes and colors contaminate it. The only thing remarkable in the matter is that so little disease has been contracted in that way—or rather has been attributed to that source.

To be shut up in a room unventilated for hours at a time, though alone, is not healthful; to be thus confined with other people is bad; but even if the room is large, to be in there with hundreds is far worse. We then take into our lungs vitiated, stagnant air which poisons our systems and undermines our health. We would refuse to drink water that had stood thus exposed in a pitcher for a couple of hours. Indeed, we would scarcely wash our hands in it. We would call it poison. Yet we buy and eat food which has been exposed in the same way and declare it to be good. Potato or lobster salad, deviled crabs and clams, roast meat of all kinds, boiled hams, macaroni and sauerkraut will absorb germs in the same way as will the water. Germs, by whatever name they are designated, will breed in food, especially that which is prepared with gelatine, as easily as in the air or the water.

The law requires the elements that make up the foods be pure. The government inspects also the buildings where the food is prepared; but now is the time, before a great epidemic of some loathsome disease sweeps over us, to protect the public still further, i. e., by the manner the prepared food is exposed for sale. It is far from appetizing to see a sleeve, regardless of etiquette, drag over the salad or meat on the table when you know the owner, and can surmise the germs the sleeve carries; or to see fingers flit over or poke into some delicious dish even when you know that those fingers are perfectly clean and as free from germs as any fingers are likely to be. Go into a delicatessen shop where the prepared food is exposed to public view and sampling in plates, pans, jars, kegs and every other device known to human invention to render it attractive enough to tempt the appetite and touch the purse. Hundreds of people pass by and gaze at it. Some stop to sample a particularly toothsome dish. Some stop to buy. There being no other place convenient to deposit that bundle, they lay it on a pile

of cinnamon buns or rolls. A muff they push between two bowls and the straggling fur, feathers or ribbons drag in the mayonnaise dressing of the salad, and the handle of the bag flops into the liquor in which pickles are also immersed. Indeed, the people are more concerned with the harm done to their belongings by the grease or vinegar, than by the havoc their belongings might do the food. That is human nature. One man whose attention was called to the fact that his sleeve was dragging in the tomatoes replied, "Oh, that doesn't matter. It's only an old coat."

Is it not an inconsistent state of affairs when every precaution is taken to avoid contamination in the manufacturing, to keep the factory light, well ventilated, clean by means of steam and vacuum machines, to sterilize all the instruments used and afterwards the retailer offers it as a repository, an asylum for all the germs in the universe? Why should the retail store not be subject to the same law of sanitation as the factory? There is a factory nearby, and doubtless there are many others, where expert manicurists are employed to care constantly for the hands of the employees. Other men and women are employed to oversee continually the cleanliness of those who in any way handle the food, from the time the raw material enters till the finished product is carted away. Some of that product is used in the concoction of dishes placed on delicatessen counters and people have coughed over it. Nobody would dream of coughing over a dish on the table if only because it were the height of ill manners, but a store seems different. Would you want to eat that food? Yet if you watch a few moments longer you will see some one buy it for supper. Wonder, now, how some ill-fated individual contracted the whooping-cough or the white plague. It is a fact being more and more generally realized by physicians that the most dangerous way of spreading diseases is by sneezing. As recently as last week a man was observed sneezing over such a counter. Reproved for it, he might have answered, "It was an accident." Yes, but the food should have been protected against such an accident.

"Pure Food" has become such a fad the people taboo shops which do not advertise "Pure Food." With the thoughtlessness characteristic of a crowd, however, they neglect to demand that the food be treated in a sanitary manner while it is in the shop. On the rear counter of one of the largest delicatessen shops in Philadelphia, before a door opening directly on the street and through which the wind was driving dust, a white coated clerk poured a liquid into small bowls filled with brown, dice-shaped objects. Occasionally he poked the little cubes with his finger, once he stopped to make change for a customer, then with the same hand which had held the money he again poked up the dice. He said it was tongue in jelly. Who would want to eat that concoction with the dust from the street, the dirt from the money, the moisture of perspiration which most naturally is on the man's hands and other impurities besides? Nobody would use a handkerchief found on the street without first subjecting it to a disinfecting bath. Nobody would put money into his mouth and yet, every day food is purchased and eaten upon which both articles have been laid. Common sense shouts to the world that such food has absorbed some of the germs from the articles with which it has come into contact. Not one of us would use a menthol pencil or tube which some one else, a stranger especially, had been holding to his nose and breathing through. We would not risk drawing into our lungs any disease with which he might be afflicted, yet why do we buy and put into our delicate stomachs victuals over which not one only, but a hundred persons have breathed and leaned and fingered and talked and coughed and sneezed, mayhap? That is disgusting to hear but it is a fact.

Many of the states forbid the use of public drinking-cups and in a short time will put a stop to public towels, soaps, combs, brushes and other articles of personal use. Physicians and the bureau of public health are advocating the abolition of pets—the cat and the dog—as disease bearers, they are blaming epidemics upon the house-fly, yet if the truth were learned couldn't the spread of disease be traced in many cases, to these cooked food counters over which persons with a cancer in the mouth or a bad case of tuberculosis are liable to have coughed? The public is particular about the water and the milk and often about the air that it breathes,

yet why have both state and public neglected the most vital question of all, the manner by which the cooked food is exposed for sale. Surely the food standing in a hot, close room where the foulness of the air due to the thousands of breaths and the dust from the streets is overwhelmed by the heavy odor of spices is neither sanitary nor healthful.

If we buy cooked food, and it most assuredly is a blessing that we can, let it be enclosed in glass cases to protect it from, not only the disease-bearing muffs, gloves, bags, bundles, etc., but also from the listless fingering of the careless clerks and customers. A man buying some sauerkraut picked up his child who had insisted upon crawling over the floor, incidentally its dress rested upon a roast turkey and it grabbed in both hands a deviled crab. The father carefully separated the crab from the child and replaced it on the pile of delicacies of the same nature. Nothing was said; and somebody bought and ate that crab, defiled as it was with dirt from the floor. If the food had been properly enclosed in glass cases such an accident could not possibly have happened. It is a fad also to have cakes made openly in full view of the customer. Recently in a department store where they were baking cakes, a cake was slipped from the pan and slid over the oil-cloth counter from which a woman had just lifted her baby. Somebody bought that cake and ate it; was it you? Doesn't your stomach turn just a little at the thought?

If the public want to see cakes baked and other foods prepared let their desire be gratified, but behind glass partitions which protect from the dust of the street, the breaths, the fingering, flies and other insects. Let these rooms be well ventilated with filtered air, made pure by being drawn through tubes or other mechanical devices in which is a screen of cotton, perhaps. Then again, the food which is already prepared should be kept in cases where the dust forced in by the opening and closing of the doors could not settle upon it. Glass cases, sunlight and filtered air where foods are kept and it is not at all improbable that the hospitals would not be so over-crowded and the death rate would necessarily be lower. Such precautions would prevent disease germs from scattering. "An ounce of prevention," says an old saw, "is worth a pound of cure." And, continues another, "A word to the wise is sufficient." If we are as wise as we think we are then we will insist upon the proprietors of delicatessen shops, be they large or small, using every precaution that light, air, and glass as well as water can produce. It will spare the board of health the expense of tacking so many cards upon doors warning those without that there is scarlet fever, measles, small-pox and dozens of other malignant diseases, not to mention the prevention of typhoid, mumps and a hundred other contagious diseases.

IS FUMIGATION WORTH WHILE?

The value of fumigation after infectious diseases has during at least two decades past been questioned by sanitarians; and one may now fairly well conclude that this procedure should be relegated to the past. It is the laity which has really insisted on the use of smell-making "bactericidal compounds," the idea being that "they smell so bad people open the windows and the air gets in." Thus it has been difficult to withstand popular desire, especially when the semi-panic following a case of diphtheria has traced the case to a school-room or a public building. Then parents, teachers and oftentimes physicians have been so insistent on fumigation that public officials have found it judicious to comply. Dr. Arms and his colleague of the Bacteriological Laboratory of the Boston Board of Health, have gathered some really scientific facts relating to fumigation and have made some pregnant observations: "Some fumigate after measles and whooping cough; others consider this unnecessary. Some pin their faith to formaldehyde, others to sulphur dioxide, and still others to fresh air, sunshine and scrubbing." And the gaseous fumigation is carried on in different ways

—formalin is volatilized in a generator, the gas being introduced under pressure through the keyhole or some other aperture in the room, all other openings having been closed; then there is the oxidation of methyl alcohol, the spraying of formalin on sheets and allowing it to evaporate, the volatilization of solidified formaldehyde, and the use of permanganate of potash.

Changes have from time to time been made by the Boston Health Department, the latest being the use of potassium permanganate in January, 1910, and the adoption in November of that year of fumigators containing solidified formaldehyde. During these changes careful records were kept to determine the comparative values of the different methods. Thousands of fumigations were made under service conditions, the curious fact being evolved that in some of the tests, no matter what method was used, certain organisms survived the fumigations; yet in none of the places under experiment did secondary cases of the disease arise. In the diphtheric investigations 19 cases were found in the same house during the first week after the original case was reported, 16 between the first week and the fourth (including the latter) and 13 after four weeks from fumigation. In the 19 cases of the first week 15 were sent to the hospital and the fumigation performed within forty-eight hours of the report; here evidently the secondary cases were from exposure to the original source of infection or to the patient who was removed at some date preceding the report. Thus contact was here a more probable cause of the secondary cases than the catching of the disease from room or furniture during the brief time between reporting and fumigation. The other 4 cases followed the release of the patient from quarantine. Thirteen cases became manifest from thirty-three to fifty-eight days after fumigation; but these can hardly be placed to the credit of the room. There remained then 16 cases possibly referable to room infection; but they were at the same time not free from suspicion of contact with some previous case. The story of scarlet fever is practically the same—with 12 "return" cases within the first week after reporting, 7 after four weeks and 8 in the interim, with the deduction that these infections came from persons rather than from inanimate objects.

It should be noted that these figures signify return cases from some thousands of original, and cover the periods of changes in method. In order to demonstrate the fallacy of fumigation the Board has since July 4, 1911, authorized the use of practically no fumigation after diphtheria and scarlet fever; using for each room, no matter what its size, a fumigator that would disinfect not over 500 cubic feet. This would mean a room 9 x 7 x 8 feet; so that fumigation for most places was notably inefficient. The householders were instructed to air the room thoroughly after the "fumigation," and to wash all woodwork. After all there is no better disinfectant than that of nature—pure air in abundance.

The results of this investigation, covering eighteen months, under the two systems, bear out the contention that fumigation after diphtheria and scarlet fever is unnecessary; and such would undoubtedly be found true of most other infections. Arms concludes: "If the labor of fumigation after diphtheria and scarlet fever would be dispensed with, as it has been in many places after measles, and real disinfection carried on after tuberculosis, much good would be accomplished, and the public would then realize that it is the individual who is the cause of the spread of acute infectious diseases in the great majority of cases."

Old Gentleman—"Well, my boy, and when does your birthday come?" Boy (who has been cautioned not to fish for presents)—"Oh, it passed by a long time ago—a year next Saturday."—*Life*.

"It's hard," said the sentimental landlady at the dinner table, "to think that this poor little lamb should be destroyed in its youth to cater to our appetites."

"Yes," replied the smart boarder, "it certainly is tough."

CLEAN UP—KEEP CLEAN.

LAST year the New York City Department of Health instituted a Civic Spring Cleaning. Some citizens got so excited over the idea when it was announced that they behaved like Mark Twain's blubber who implored the bystanders to hold him back, he felt so full of fight; they started right in throwing old washstands, bedding and what not else through the windows into the streets and had to be restrained by the authorities. May 1 was the date set for the ceremonies to begin. The Street Cleaning and the Water Departments, with certain municipal bureaus co-operated loyally with the Commissioner; and all kinds of civic organizations (especially women's clubs and leagues) took effective part. The city was divided into about one hundred sections, a dozen or so of which were to be covered daily; the housewife was notified beforehand on what date to be ready for the carters. All rubbish and dirt were removed from cellars, yards, alleys, the environs of houses, fire escapes, roofs, vacant lots, catch basins and streets, which latter were then thoroughly flushed. Offensive trade odors, nuisances, smoke and cinders from factories were to be minimized; flies were to be starved rather than swatted; the lying-in chambers of mosquitoes to be abolished; rats and mice separated from their provender. Especially were grocers, bakers, fruiterers, butchers, fish dealers, confectioners, hotel and restaurant men to keep their places clean and to screen or window their wares.

This idea of Civic Spring Cleaning should spread again this year by a kind of beneficent contagion all over the Union; every city, town, village and hamlet in the land should be a spotless community—not only in May, but all the year around. The idea, when you come to think of it, is bigger than a presidential election, with at least as much fun to be got out of it. In every berg let closets, bureaus, trunks, satchels, nooks and crannies from cellar to ceiling throughout the household be searched for hibernating flies and of vermin (especially that polecat among insects which shall here be nameless and of which the most careful housewife cannot always prevent the entry). Screen windows and doors; screen food with meshes 18 to the inch to keep out mosquitoes as well as flies. And, above all, keep those winged disease sponges out of the sick room. In rural districts the snow covers a multitude of insanitary sins—all kinds of refuse, garbage, bedding, straws, waste paper, rags, fermenting stuff, dead animals accumulate from November to April; come spring then there is a vast amount of putrescence to be got rid of. Attend especially to the manure heap; for it breeds 95 per cent. of the flies; but don't neglect barns, chicken yards, hog pens, closets, and the like.

A single perverse headed citizen may keep a whole neighborhood pestilent. Reason with such an one in a brotherly way; if he won't see the point be disagreeable to him every way you can think of until he does. Perhaps you may have to report him to the authorities. (Maintaining a nuisance by the way is in most places a misdemeanor punishable by law.) And maybe the authorities will have to be jacked up. If they won't enforce the law pound them until they do. Work up the psychology of advertising as applied to civic cleanliness. Ingratiate yourself with the women's clubs; get boards of trade, teachers' institutes and farmers' leagues busy; engage lecturers to show their horrendous lantern slides; get the clergy to preach sermons on the cleanliness that oftentimes leads straighter than theology to godliness. Get placards put in windows, and posters on fences. Above all, corral the press. Your own State Department will most likely have a lot of literature in which you will get all the necessary pointers; what is lacking you can get by mail from the Bureau of Entomology of the Department of Agriculture at Washington and from the Fly Fighting Committee of the Merchants' Association, 156 Fifth Avenue, New York.

CHEESE. A NEGLECTED FOOD.

Our Federal Government is distributing useful knowledge on cheese as an economical diet. The latest pamphlet is Farmer's Bulletin 487, which any housewife in the land, either on a farm or in the city, can have by simply sending a request to the United States Department of Agriculture, Washington, D. C. Here will be found dozens of most appetizing recipes for the preparation of cheese both as a food and as a relish.

Cheese has a very high food value and a very low price as compared with other foods. Fresh beef has, weight for weight, little more than one half the food value of cheese; this is so also of practically all the fresh meats. Fish and pork have each much less nourishment in them than cheese; whilst eggs have a higher percentage of water. About the only product that rivals cheese in food value and cheapness is dried beans.

The nutritional value of cheese is very great; this food contains in very compact form pretty much every thing that is needed for the sustenance of the body and the statement is true of all kinds of cheese, including European brands.

Some people think cheese is not digestible, that it disagrees with the stomach; this is only a notion. It has been proved that when well cooked and prepared, cheese is a very digestible food, not only as a delicacy or a condiment, but as the chief part of a meal.

We are somewhat blind to our opportunities; we send our American cheeses (which are called also in the market Cheddar cheese) in large amounts abroad. The English people are especially glad to get them and they eat many of them; not only because they are cheap but also because they taste good and nourish the body.

The average American citizen prefers to eat 170 pounds of expensive meat a year, besides fish and poultry in proportion—but only four pounds of cheese; this may be one of the reasons why our people complain so much of the high cost of living.

The Swiss are famous for eating cheese; this food with bread forms a large part of the diet of this very healthy people. The Germans consume large quantities of their excellent skim milk cheese, one variety of which the soldiers are said to salute as being of superior rank. The French also have some very highly flavored cheeses, in which the germs that produce the flavor do really seem to be working over time. All the same there is no harm in highly flavored cheeses; they are all wholesome and nutritious.

A SONG OF SPRING DAYS.

Sing a song ob spring days,
All de worl' in bloom,
Mr. Bluebird singin'
Mid the flowers' perfume.
Mr. Catfish bitin',
Mr. Bee a-hummin',
Sing a song ob springtime
Comin',
Comin'.

Sing a song ob springtime,
Sunshine warm an' bright,
Turtle dove a cooin'.
World all full ob light,
I longs to hear de peckerwood
On de tree a-drummin',
Sing a song ob springtime
Comin',
Comin'.

—*P. H. A. in Florida Times-Union.*

CONDOLENCES.

Mrs. Hen was in tears; one of her little ones had been sacrificed to make a repast for a visiting clergyman.

"Cheer up, madam," said the rooster, comfortingly. "You should rejoice that your son is entering the ministry. He was poorly qualified for a lay member, anyhow."
—*Exchange.*

WHY HE KNEW.

A Christian Scientist found a small boy sitting under an apple-tree doubled up with pain.

"I ate some green apples," moaned the boy, "and how I do ache."

"You don't ache," answered the C. E.; "you only think so."

"That's all right," said the boy; "you may think so, but I've got inside information."—*London Opinion.*

RURAL SANITATION.

THE HOOKWORM DISEASE.

By William H. Peters, M.D., Providence, R. I.

A year or so ago a father, mother and seven children were all living together in a squalid, one-roomed cabin, with no possibility of the ordinary decencies of life. The ground nearby their home was becoming saturated with their night soil, a peculiar factor to their undoing, as we shall see. They were just about starving on a small, wasted, unproductive farm. They were all illiterate and all practically "no account." Every phase of their natures—mental, moral, volitional, physical, spiritual—was dreadfully below par. It is one of the saddest things about existence, and one we cannot get away from, that all phases of human nature are intimately and inevitably bound together, so that the whole of any one life goes to pieces, whenever there is anything the matter, for any length of time, with any one phase of that life. Now, what was really at the bottom of the trouble with this whole family was that it was physically sick. Every member of it was suffering from the hookworm disease, which is caused by a microscopic hook-mouthed worm found in dirt (especially sand), or in muddy water, or in human discharges. The eggs of this worm get from the ground into cuts or bruises in the feet, then into veins and so to the heart, the lungs, the windpipe, and down the gullet to the stomach and then the small intestine (which is its paradise), the egg developing into the worm during this migration. Or the worm is eaten with uncooked vegetables or is taken in from unwashed hands or drunk in dirty water. There are said to be dirt-eaters (geophagi); and of course these people (who at most are probably very few indeed) have the hookworm disease.

When the parasite reaches the small intestine it hooks itself to this membrane and sucks blood from it. When it lets go there is a minute hemorrhage from the wound; and so the precious life fluid is drained. Then the germs of other diseases get an entry through that wound; and indeed the hookworm, besides being a vampire, is considered also to introduce poisons of its own making into the system of its host. Besides, the part of the intestine thus attacked is put out of action, so far as its natural function in the body is concerned. Who wouldn't be sick physically, morally and every other way; who wouldn't be without ambition, in such circumstances? Who wouldn't be disheartened and go to pieces, having such a disease? So naturally, the poor people thus attacked become unfit for work and are accused of laziness. Truly enough, the "laziness bug" has got them; they are really grievously ill and oftentimes die, especially the children. Here is the cause of the "common anemia" of our Southland. The sufferers (at least two million of them) become anemic (weak, watery-blooded), they have bad stomachs and bloody dysentery; they are feverish; their strength is sapped (a terrible thing in a man once strong); their vitality is lowered, so that besides having this disease they become easy prey to others—consumption, typhoid, pneumonia, malaria. Their skin is dirty or muddy or waxy-white (Florida complexion). They have lack-lustre eyes (like those of the Ancient Mariner); and an odd, pitiable, blank stare. They are short-winded and their hearts palpitate and sound rough in the beat. The children are stunted and ill-developed; and pot-bellied many of them (like a sybaritic dwarf) on account of enlarged liver and spleen and intestinal flatulence. The victims of uncinariasis (so the doctors call hook worm disease) have swollen feet and "ground itch," due to the penetration of the skin by the eggs. Mighty sick, such patients are, as any one will agree. They are worse in summer than in winter, the blacks suffering more than the whites. Hookworm disease is most common in the tropics, and among miners, brick and tunnel workers.

This was the Egyptian chlorosis (or green sickness) of thirty and more centuries ago. Above the thirty-fifth latitude it is rare; south of this it is very prevalent. One quarter of the people in Porto Rico have been dying of it; it seems prevalent throughout the West Indies. No doubt some of our soldiers brought it home in the Spanish-American war. Hawaiians who emigrate to us certainly bring it with them —not all, of course. The disease is not uncommon in the Philippines. The poor suffer most, but not altogether; thirty per cent of the students of the University of Georgia, many of them sons of the best and most influential Southern families, were found afflicted.

Well, to get back to that wretched family. The Rockefeller Commission for the Eradication of Hookworm Disease came along and, aided and abetted by other agencies hereinafter to be specified, cured all that family of its abhorrent disease—quickly, pleasantly and safely, as the doctors say. By the use of two simple remedies—thymol and epsom salts—all were completely restored to health, under Providence, physically, spiritually, mentally; and all at the slight cost of 77 cents the head or something under seven dollars for the whole performance.

Here was one of the most striking and brilliant before and after illustrations ever presented for the consideration of the civilized world. The whole family lost that dreadful, blank stare into nothingness; they became virile and sweet, manly and womanly, clean body and soul! The father and elder sons replaced that filthy cabin with a neat frame dwelling of two stories, all of their own building. The younger children are getting their blessed schooling. The farm is productive and amply sustaining, because now the family have the strength and the grit to work it. They have plenty of initiative now; and there is no telling where this felicity will eventuate (as they say in the minstrel shows), or how near the stars that family are going to land.

This is just an example. Since the aforesaid Commission got busy the same trick has been turned many thousands of times, and more than 400,000 of the dear Lord's people—men women, and children—have been regenerated, literally made over. Mr. Rockefeller, by way of starting the game, announced his readiness to meet all expenses up to one million. The Commission, composed of eminent men in medicine and in social science, got to work October 1909; its office is in Washington D. C. The United States Public Health Service has been powerfully adjuvant. Dr. C. W. Stiles of that Service, first directed public attention to the hookworm situation, and it was his piece in the paper that attracted Mr. Rockefeller's eye, and became the genesis of the Commission, of which Dr. Stiles is the Scientific Secretary—more power to his elbow! It began to determine the area and the degree of hookworm infection; to treat the sufferers; and to remove the source of infection by putting a stop to soil pollution. The State was adopted as the unit of organization; and co-operation with existing health agencies was established. A State Commission and a State Board of Health jointly appointed a State Director of Sanitation, who organizes and directs the work within his borders. A field force of sanitary inspectors and a laboratory force is also provided; and they, co-operating with local health boards and individual doctors and citizens, make up the organization.

One of the chief objects is to educate the body politic in prevention; and in this work —purely voluntary and a labor of love— physicians are enlisted; women's clubs and churches are active; boards of trade are on the job; newspaper articles are gotten into the ever-potent and ever-willing press; bulletins and letters are distributed; lectures and demonstrations are given; and any amount of personal service is done. An enormous factor is the local temporary dispensary, to which the country folk flock most eagerly from many miles around, by boats, by train, by any possible conveyance— a dozen miles over rough roads; men and women and tender children travel by foot, until the anemic fall by the wayside and are taken up and brought to the blessed haven in the wagons of the up-to-date Sanitarians. "It looked like the days of Galilee"—with healings assured for almost all! At three in the morning the sick are there. They linger, gather in groups around the exhibit-tables, listen to the stories told by those who have been sick and have been restored, and return to their homes to report to the neighbors what they have seen and heard.

In order that no man may speak of indiscriminate charity, and of the humiliation connoted by the term, the expense of this work is borne jointly by the Commission, the States and the counties benefited. The Commission's third annual report tells of the work done in 1912, when an average of

762 hookworm victims were treated daily (except Sundays)—238,755 in eleven States, Virginia, the Carolinas, Georgia, Alabama, Louisiana, Mississippi, Texas, Kentucky, Tennessee and Arkansas; 400,000 in all since the work began. About half the rural children examined have been found afflicted; they belonged mostly to families on the edge of pauperism, and sad to state, not infrequently over the edge and in the depths below—and this in hundreds of communities. Here is indeed an epic, physical, psychic and economic regeneration; a noble reconstruction, and one altogether benign and friendly, as far as the poles from the rancor and the bitterness which attended that other reconstruction two-score and more years ago, and altogether atoning for what was mean and wicked in it.

BIRD CONSERVATION.

For at least a score of years past there has been a brutal and insensate destruction of American birds. Adequate protection has been denied them by reason, it would seem, that "the sportsmen won't stand for it." It may be the gunner won't; but every sportsman worthy that estimable title, rather than objecting, will be very strong for such regulations as may be made by Dr. T. C. Palmer, of the Biological Survey of the Department of Agriculture, for the enforcement of the McLean law to this end. The notion is erroneous that our birds are the exclusive property of those greedy and selfish men who shoot up to the bag limit. Ninety-five per cent., game and not game, belong to the people who haven't the remotest idea how to handle a gun.

Our shore birds are fast vanishing. There are, or have been, more than sixty species of them in North America. They frequent the shores of all bodies of waters; but many are equally at home on plains and prairies. They used to swarm along the Atlantic coast and in our prairie regions; to-day they are pitiably scarce. The wonder is, they survive at all under conditions so adverse to them. In both fall and winter they are shot along the route of their north and south migration. They decoy readily and persistently, despite murderous volleys. Mr. W. L. McAtee, of the Biological Survey ("Our Vanishing Shore Birds," Civ. 79), indicates other ways by which their existence is made precarious.

Nor need we plead for bird protection on sentimental or esthetic grounds alone. Many species eat such mosquitoes as are virulent disseminators of disease germs. Fifty-three per cent. of the food of birds from one locality was found to consist of mosquito larvæ; and among the insects thus consumed was the salt-marsh mosquito, for the elimination of which certain States have expended much in money and energy. Adult house flies and their larvæ, which seriously molest valuable livestock, have been found in the stomachs of several species of birds. The North American fever tick, so injurious to cattle, are devoured by the killdeer and the upland plover. Crane-fly larvæ are most destructive in grass lands and wheat-fields; shore birds are avid of these flies. Birds again are very fond of grasshoppers, which are most destructive of corn, cotton, and other crops. Twenty-three species of shore birds were found to have fed on Rocky Mountain locusts—great grain-consumers. Some of our severest economic losses are occasioned by insect destroyers of forage and grain crops; these pests are a natural food of shore birds. The army-worm, cutworm, cotton-worm, tobacco-worm, and potato-worm are meat for the avocet, woodcock, pectoral, and Baird sand-pipers, upland plover and killdeer. The principal farm crops have many beetle enemies; birds thrive on these beetles. Much else to the same effect is on record. It were well indeed if the governments of all our States would second the Biological Survey in the enactment and *enforcement* of legislation protective of bird life. The real sportsman would heartily second such legislation; only the "game-hog"—who after all isn't very numerous—would remain disgrumbled.—*Lippincott's.*

WASTE DISPOSAL.

"Out of sight, out of mind" is a maxim well enough suited to some aspects of life; but it will not do as to hygiene and sanitation. Dr. H. B. Bashore* explains how, in country houses where water under pressure is available, water-carriage of human excretion is desirable, by the use of water-closets and plumbing. There then follows, as a matter of course, the use of the sewer and the great question of sewage disposal. For a house situated near the sea or on a tidal river the sewage is safely run directly into such a body of water. But raw sewage should absolutely not be run into a fresh water stream or lake. What alternatives are there?

Intermittent sand filtration disposes of sewage satisfactorily and gives an effluent which can be turned safely into any stream, however small. Such a plant, though used extensively in small towns, is advisable for country houses only where the character of the soil or the topography makes it difficult to use one or the other method of irrigation—surface or subsoil—either of which is an ideal plan of disposal for nearly all isolated houses.

In surface irrigation the sewage is simply distributed over cultivated land, where it is rapidly absorbed and the filth disposed of by the numerous bacteria of the soil. The house-sewage is here first sent to a settling tank, or rather an intercepting chamber, where the solid material is decomposed and macerated into very small particles; from this the liquid passes into a flush-tank, whence it is discharged by an automatic siphon into surface-gutters, and from these allowed to spread over the ground or run into furrows between growing vegetables or grain. The intermittent flow of sewage, which is brought about by the use of the siphon, is desirable, especially in winter.

Such surface disposal of sewage is perfectly satisfactory and creates no nuisance. Yet where the location is not suitable subsurface irrigation might be more desirable. In this latter case the house arrangements are the same as for a surface plant except that the foul liquid, after leaving the flush-tank, flows into open-jointed drain-tiles laid under the ground and within 8 to 10 inches of the surface. This last is important because the filth destroying bacteria are vastly more numerous near the surface. For such a plant the flush-tank should have a 50 gallon capacity for each person and in good absorptive soil about 100 feet of 2 inch tile for each 50 gallons capacity of tank.

There is a still simpler and cheaper method, provided land is abundant and the house isolated; in this the settling- and flush-tanks are eliminated and the sewage is turned directly from the house to the land, flowing from the sewer into shallow trenches, between which corn, vegetables or trees may be planted. In order not to overtask the land at any one place the trenches should permit of being blocked at various points so as to divert the sewage into different trenches. A wintry climate does not interfere with the working of these various sewage forms, for the sewage, more or less warm, readily cuts its way through snow and ice, and gradually filters through the soil beneath.

With the sewage disposed of, there yet remain such other waste products, as kitchen garbage, rubbish and ashes. These latter are easily disposed of if the various kinds are separated when collected. There should be a series of receptacles for the different materials and a certain place for each. The paper, rags, rubbish and the like, for which flour-sacks, supported by iron racks, are used, might be still further subdivided. Or the receptacles might be arranged in one place, instead of being scattered here and there about the premises; an accessible place is in a large box containing the necessary number of compartments at the rear of the house, near the kitchen door.

As to the ultimate disposal of household waste: The garbage is best put into a shallow furrow in a field and "earth burned"—preferably in the vegetable bed. Every evening the garbage should be covered with earth. Besides this a tight board lid should cover the hole during the summer months else the place may become a breeding place for flies and become an abominable nuisance. Screening the hole will not suffice; for fruit flies will creep through a screen of the smallest mesh and breed in the garbage. Non-combustible stuff (bottles, tin cans, scraps of metal can be sold to junk dealers; and unsalable combustibles should be destroyed by fire. Ashes can be used in almost any place for filling, making paths, or for a foundation under pavements—nothing better for such purposes.

*The Sanitation of a Country House, by John Wiley & Sons.

Come we now to country houses of the smaller kind, where a sewerage system is not available. For such we have to adopt the "dry" method of excreta-disposal. This calls for a galvanized-iron pail and a seat exactly like that of an ordinary water closet.

At the side of the seat is a box for holding some such absorbent as sifted coal-ashes or dry earth, which are put on the excreta. When the pail is filled it is emptied on cultivated land—a field or a vegetable-bed. If the pail is emptied near the house a little earth should be raked over the pile; and in a short time (a week or two in summer, with corresponding increase in cold weather) all evidence of filth will have disappeared. Such a "dry" closet system is, if properly conducted, cleanly, inodorous and sanitary. When this "dry" method is used waste waters from the bath and kitchen sink can be disposed of by some form of surface drain. For example, a six-inch galvanized gutter pierced every twelve inches by one-fourth inch holes. This allows the filthy water to be distributed evenly over the ground without forming puddles and mud holes. We dispose of garbage, ashes and rubbish as above stated.

A vegetable-bed has very considerable waste-destroying properties. Such a bed, 16 by 20 feet, has for ten years received all the waste, of every kind, of a family of four; and has destroyed all this filth without offense to sight or smell, and has besides made the bed one of exceeding fertility.

MANURE.

The value of this fertilizer is not sufficiently appreciated. The droppings of animals in city streets should be saved for the agriculturist, instead of being dumped into the sea. Manure represents the waste material of the food that has grown on the land; and it should be returned to the land to supply the elements used by the growing vegetation. Any other method of manure disposal tends to rob the soil of its fertility.

In the rural districts, states Dr. I. M. Brewer,* most of the manure is returned to the land. But very often it is handled in such a way that there is an unnecessary loss of fertilizer. Scientific agriculturists find that the sooner the manure is got on the land the better; and there will be less loss. The farmer's best interests are served by the sanitary management of manure. Some method of storage must be provided for that portion of the year when it cannot be spread on the land.

Manure in storage loses its value through: (1) Fermentation, whereby a certain amount of the nitrogen is lost; (2) Weathering and bleaching, which causes a loss of soluble constituents, such as phosphates and potash. To prevent these losses the manure should be stored in sheds with cement floors, or, better, in cement-lined pits; both pits and sheds must be fly-proof. If litter to the extent of one-third of the dry food consumed by the animal be used, the urine will be absorbed. Keeping the pile moist will delay the fermentation. Preservatives have not proven satisfactory. The pile should be as compact as possible. How manage manure? (1) Place it on the land as soon as possible; (2) spread it uniformly; (3) keep the air out as much as possible; (4) keep it moist but not wet; (5) protect it from extremes of heat or cold. Fowl produce much manure which, if not properly attended to (at least once a week) will become the breeding places of flies; and a daily cleaning of the hen-house will insure better health among fowls.

*Rural Hygiene (Lippincott's, Phila.).

A man is soon forgotten after he is dead, unless you happen to marry his widow.

Many a good man is too busy reading the Bible to help his wife carry up the coal.

Many a girl goes abroad to have her imagination cultivated, under the impression that it's her voice.

A BUNCO GAME.

"'Ma! Ma!' Willie sobbed. 'Do my ears belong to my neck or my face?' 'Why, what is the matter?' was the temporizing reply. 'Well, you told Mary to wash my face, and she's washing my ears too.'"—*Outlook.*

CO-OPERATION IN PUBLIC HEALTH WORK.

The April *World's Work* tells of how seven Massachusetts towns co-operate to get an efficient public health service that no one of them could afford to pay for by itself. A year ago Wellesley, Framingham, Weston, Needham, Melrose, Winchester and Canton abandoned all or part of their other resources of medical inspection and put this work in the hands of a central organization under Professor Phelps, who was then giving a course in sanitation at the Massachusetts Institute of Technology.

In this seven-town organization are engaged an administrative officer, a chemist and bacteriologist, a plumbing and sanitary inspector and a corps of assistants. These men are responsible for all the public health work in some of these towns and for milk inspection only in others. Their central office and laboratory are at Wellesley, but they have regular office hours which they keep in each of the towns, and they maintain stations at strategic points from which they distribute antitoxin and virus for vaccination. Diagnoses of diphtheria, typhoid fever and other infectious diseases are reported by telephone.

Altogether, the public interest in the health of 55,000 people is guarded by this organization. 30,000 of these people have the complete service; the rest, only milk inspection. The total cost is $6,300 a year—12 cents (about the price of a quart of milk) the individual; and this pays for highly trained experts. These seven enterprising towns have as good a department of public health as large cities have.

This plan is being operated under exceptionally favorable conditions in Massachusetts; but with the rapid increase in the number of men trained especially for sanitary work there is no reason why other towns and rural communities should not do likewise. It is co-operation as to one of the most vital of human needs.

THE COUNTRY "WAITING ROOM."

Every one who goes about at all in out-of-the-way places—in suburban regions and country districts—must have had the experience of drifting into so-called waiting-rooms along railways or trolley lines, calculated to "turn the stomach" of a well-bred pig—unventilated, dirty, offensive, in fact, to all the senses, an outrage upon decency and a menace to public health. Usually in charge of ignorant and unsupervised care-takers, there is not even a semblance of sanitation. That these places particularly in cold weather, when waiting passengers crowd into them in large numbers, are fertile sources of disease there is every reason to believe. There is absolutely no excuse for their continued existence in this age of sanitary awakening. They have persisted simply because it has been nobody's business to abate them. It is very much to be hoped that when the State Department of Health takes hold of village and town sanitation, as it should have done long ago, this question of wholesome waiting-rooms will be one of its first points of attack.—*Dr. Youmans in the N. Y. Evening Post.*

FROM AN AFTER-DINNER SPEECH

By Simeon Ford.

Last year I was not with you. The very day you had your legs stretched under Boldt's mahogany, my leg was being pulled by a high-priced surgeon up at St. Luke's. While you were seated at tables groaning with good things, I was a good thing groaning on an operating table. Those of you who have never had occasion to part with any of your vital organs have no idea how embarrassing it is to a shy man, to be strapped on a table, en dishabille, surrounded by cute little trained nurses, gazing at you scornfully, while a surgeon with a glittering eye and a sharp cleaver prepares to explore your interior.

It was a great comfort to me, however, to realize that I had led a blameless life and never charged the public for bread and butter, or for hanging up their hats and coats, and had always transferred baggage from the Grand Central Station to my hotel free, and had never encouraged turkey trotting with victuals.

A DIVISION OF RURAL HYGIENE.

Rural Districts Call for Health Protection.

The following letter was sent out under date of February 14, 1914, from the secretary's office of the New York State Grange at Skaneateles to the officers of the local granges throughout the State:

"The time has arrived when we residents of rural New York should demand as careful attention to community health problems as is devoted to the health of our cities. In the last nine years the death rate in rural New York (all communities under 8,000 classed as rural) has increased from 15.2 per 1,000 to 15.4 per 1,000 while the rate in New York City has fallen steadily in that time from 20.1 to 13.7.

"If the death rate had been as low in rural New York as in the metropolis last year it would have meant the saving of more than 3,000 human lives! This means that, at the very low estimate of $5,000 as the value of a life, we lost in the country districts more than $15,000,000 last year and lost it needlessly!

"We are enclosing herewith for the consideration of your grange, a printed copy of the resolution adopted by the State Grange in Poughkeepsie on February 6, 1914, calling attention to these facts and demanding that the State Department of Health establish a Division of Rural Hygiene. This will give us some of the public health protection in rural New York which has so long been given to the residents of the cities.

"We are also enclosing a suggested resolution on the same subject which we trust you will present to your grange and urge that it be adopted. If this resolution or a similar one is adopted, it is highly important that the Legislature be informed of your action."

RESOLUTION ADOPTED BY STATE GRANGE.

"Resolution demanding a Rural Hygiene Division in the State Department of Health, adopted by the State Grange in session at Poughkeepsie on Thursday, February 5, 1914.

"Whereas: The death rate of Rural New York State is higher than that in New York City, and is increasing, while the death rate in the metropolis is falling and has been falling for the past nine years, and

"Whereas: The rural section of the State by reason of its many natural advantages should be, and can be, healthier than the cities, with their congested living conditions, and

"Whereas: If the death rate in rural New York last year had been as low as that in New York City, rural New York would to-day be the richer by more than 3,000 human lives, therefore be it

"*Resolved*: That the State Grange reaffirm its approval of those measures for the prevention of disease, such as tuberculosis hospitals and public health nurses, which the grange has repeatedly approved and, through its tuberculosis committee, has consistently worked for, and be it further

"*Resolved*: That we wish to register herewith our emphatic protest against the continuance of conditions in rural New York State which permit a loss of 3,000 human lives that could have been saved if measures for the prevention of disease adopted in the metropolis were to be put in operation in the country, and be it further

"*Resolved*: That the Grange continue its public health work on broader lines than in the past and that the tuberculosis committee be renamed the Public Health Committee and further, that the said Public Health Committee cooperate with all existing agencies in urging upon the Governor, the Legislature, the State Department of Health, and all local boards and officials the importance of devoting the best efforts of the State to the conservation of human life in our rural districts and that the said committee be instructed to wait upon the Commissioner of Health at the earliest possible moment to urge the importance of an intensive study of rural health conditions and the necessity for the best effort the Department can put forth in remedying all possible defects in rural sanitation and hygiene and rural public health administration."

The State Department of Health Ready to Do Its Part

Commissioner Biggs, in commenting on a statement issued by the U. S. Bureau of Census showing the total deaths and death rates in the various registration States, said:

"That New York State should have a higher death rate than any other State in the registration area excepting Maryland, which has a large colored population, is convincing proof that our State has been very negligent in the past in providing the necessary legislation and appropriations to properly protect the lives and health of its citizens.

"The 1910 U. S. Census shows that the population of New York State is made up of as large a per cent of persons under the age of 45 as that of our adjoining states, and the per cent of the population in ages 45 and over is less than that of Massachusetts, Vermont and Ohio, and but one per cent above that of Pennsylvania and New Jersey.

"While there has been a steady decrease in the urban death rate since 1904, the rural death rate has been on the increase, and since 1910 exceeded the urban rate.

"The rural districts have failed to realize the great importance of improved sanitation, and very little progress has been made in the rural districts in improving local sani-

tary conditions as compared with the great advancement in our cities.

"The State should inaugurate an active campaign to educate our rural population as to the benefits to be gained by making use of modern sanitary knowledge. This is why I am so anxious to establish in the State Department of Health a Division of Rural Hygiene. The urban death rate last year was 14.5 per 100,000 population and the rural 15.4. The City of New York with its great congested population made up largely of people coming from the rural districts of foreign lands where little knowledge of sanitation exists, had a death rate of but 13.5. Had this rate prevailed throughout the State the total deaths in the State would have been 133,475 instead of 145,054, which would have meant a saving of 11,579 lives.

"While it is not expected that this great saving of lives can be accomplished in a short time, there is no reason why, with sufficient funds to establish and maintain an active and efficient Division of Rural Hygiene, the State Department of Health can not save thousands of lives that are lost each year by preventable diseases.

"The rural death rate from general diseases, typhoid fever, malaria and diarrhea and enteritis is greatly in excess of that in the urban districts.

"The infant mortality in our districts shows a wanton loss of life, while the health authorities of our cities are succeeding in reducing the death rate of infants under 1 year of age and from 1 to 5 years, by improved water and milk supplies and the establishment of infant welfare stations and visiting nurses, no special effort is being made in our rural districts to 'save the baby.' The average mortality of children under 1 year of age in New York State during the past ten years has been 26,080, and under 5 years of age, 37,873.

"While the general death rate of the State last year, as a whole, was nearly the same as during 1912, we find that the mortality of infants in the rural districts increased from 100 per 1,000 living births in 1912 to 111 in 1913. There was a reduction in the cities of the State from 111 to 109.

"The number of deaths under 1 year of age per 100 deaths at all ages increased from 12 to 13 in the rural districts, while it dropped from 20 to 18 in the urban districts.

"The high death rate in some of our cities also shows the need of greater work on the part of the local health authorities to improve local sanitary conditions.

"The wisdom of placing upon our statute books health legislation which gives the State Department supervision over the work of local health administrations, and the creation of a Public Health Council with power to enact a State-wide sanitary code, is sure to result in great benefit to the citizens of our State."—*From the Monthly Bulletin of the New York State Department on Health.*

THE TEN COMMANDMENTS OF GOOD CITIZENSHIP.

I. Thou shalt honor thy city and keep its laws.

II. Remember thy cleaning day and keep it wholly.

III. Thou shalt love and cherish thy children and provide for them decent homes and playgrounds.

IV. Thou shalt not keep thy windows closed day or night.

V. Thou shalt keep in order thy alley, thy back-yard, thy hall and stairway.

VI. Thou shalt not kill thy neighbor's bodies with poisonous air, nor their souls with bad companions.

VII. Thou shalt not let the wicked fly live.

VIII. Thou shalt not steal thy children's right to happiness from them.

IX. Thou shalt bear witness against thy neighbor's rubbish heap.

X. Thou shalt covet all the air and sunshine thou canst obtain.

The greatest menace to health in a city is the influential citizen who insists on his right to live like a dog and be a menace and a nuisance to all his neighbors.—*Bulletin* of the Indiana State Board of Health.

IT HAPPENED IN CAPE COD.

You might go meeting men from sunup to nightfall, the twenty-fist day of June, and not find anyone better natured, or truer hearted, or more loyal than Tom Strong. There are hundreds of things to prove this. For instance, when Bill Williams was in hard luck they got up a paper, so as Bill could own a horse and support his family by peddling tea throughout the Cape for a Boston company; and of course they took it first to Tom; who headed it with five dollars. Most every paper like that was taken first to Tom; he was sure to give most, though he wasn't any capitalist; and others would be ashamed to go very much under. And Tom's idea was always known to be: "Of course we can't let any one of our people want for anything." Besides, Tom being a bachelor, it was taken for granted he could do for others more than a family man could do; anyway he generally did. Well, Tom had been suffering off and on nigh onto two years, getting thinner and thinner and weaker and weaker; but he bothered no one about it. Until one day he vomited blood; lay there helpless until a boy, coming in to buy something, ran out frightened and told the neighbors. Then they put him on a cot in the back of the store, where he kept vomiting red, until it was hard to believe there was another drop of blood in his body. The doctor wouldn't be sure he had more than half a day to live; but somehow he did get Tom around so as he didn't die, though for weeks he kept betwixt and between; and it was months before he could get out of bed. Then he took to going about, though the doctor told him he had no business to; the first few rods he walked made him feel fit to drop, about like a codfish stood on its tail and left without support. Besides the stomach ulcer that the bleeding came from, the doctor found that Tom's lungs were far from what they ought to be; and that his heart was wabbly too.

But that six months on his back had pretty nearly cleaned out Tom's bank account; besides he had to sell a cranberry bog, and some little patches of ground that he owned to meet the heavy expenses of the sickness. You'd have thought the neighbors would now just naturally get up a paper for Tom. But no one seems to have thought anything about it. Anyway, nobody made a move for it, possibly sensing that Tom wouldn't stand for it if they had. It wouldn't have made any difference at all to Tom if his little journey here had ended with those hemorrhages; but now one thing kept sticking in his crazy crop—that he couldn't afford to die owing any man a cent. So he just used up every ounce of strength he had crawling about the country getting orders, and trying to rebuild his grocery business. And among other things he asked a man who had borrowed a lot of money from him for payment of the debt. The man couldn't pay him in money, but he gave him instead a pool table worth about a quarter of what he owed. So Tom had this pool table put up in the rear of his store. And here his friends—straight honest fellows; for although he knew pretty nearly everybody, he wasn't really friendly with any other kind—here his friends congregated of evenings to spend half an hour or so playing pool. Tom made no charges for the pool, although when they dropped in, besides playing pool or looking at the game they were likely at the same time to buy things that were needed at home. And there were no drinks, of course; for besides this being a no license village Tom wouldn't have stood for whiskey anyway. Yes, there were "tonics," when anyone had a mind for them —ginger, sasaparilla, root beer and things like that; with ice cream Friday and Saturday evenings. And so, around this pool table there was nothing more wicked going on than geniality, good fellowship, wholesome entertainment and mutual consideration; especially for Tom. And the game itself? How was it different from croquet, or quoits, or checkers or anything like that? And what a contrast was Tom's store with the other grocer's, where the village post office was! The women folks going for their

mail and such like were in constant danger of annoyance from the village loafers congregated about the entrance. And not infrequently there were scraps around that place that would have made a city mill seem like a game of ping pong. Yes, the owner of that store was a pillar of the church; but anyone spiritually minded in a queerish way might any time find some middling hard cider in the rear of that post office grocery!

Now, what disheartened Tom Strong more than anything else he had been up against since his trouble began was, that Miss Amy Jenkins, who kept summer boarders, so many of them there had to be tents to accommodate the overflow—and got a dollar for dinner from transient the food of which couldn't have cost her much more than a dime; and who had for many years previously got all her groceries from Tom—yes, as much as fifty dollars a season. Miss Amy now refused to deal any longer with Tom, and turned all of her trade over to the post office grocery. Why? Because she belonged to the church; and so wouldn't abide a pool room nor any man that kept one! And that was funny too; because young Si Turner, Miss Jenkins's nephew (that lived with her) was to be found several nights a week in Tom's place. And a mighty good place it was for him to be into and he could easily have been about worse things than playing pool there.

Now, it doesn't seem Tom took it so hard on account of the money, although he needed that badly enough too. But he had been friendly with Miss Amy through many years; and they do say that in his twenties he had made up to her and had been jilted. And what's more, that his luck might have been different if he had tried twice. And then again (some mean people thought) it isn't always easy to tell when a man is really in luck and when he isn't.

But the point is, that all this is a puzzle story; the puzzle being to find the most Christian character in it.

STANZAS.

Where forlorn sunsets flare and fade
On desolate sea and lonely sand,
Out of the silence and the shade
What is the voice of strange command
Calling you still, as friend calls friend
With love that cannot brook delay,
To rise and follow the ways that wend
Over the hills and far away?

Hark to the city, street on street
A roaring reach of death and life,
Of vortices that clash and fleet
And ruin in appointed strife;
Hark to it calling, calling clear,
Calling until you cannot stay,
From dearer things than your own most dear
Over the hills and far away.

Out of the sound of the ebb and flow,
Out of the sight of lamp and star,
It calls you where the good winds blow,
And the unchanging meadows are;
From faded hopes and hopes agleam,
It calls you, calls you night and day
Beyond the dark, into the dream
Over the hills and far away.

—*W. E. Henley.*

It is related that one day a man came to Lincoln with a sad tale. His son had been sentenced to death, an only son, too Lincoln said kindly:

"I am sorry I can do nothing for you. Listen to this telegram I received from General Butler yesterday," and he read the following:

"President Lincoln: I pray you not to interfere with the courts-martial of the army. You will destroy all discipline among our soldiers."

Lincoln watched the old man's grief for a minute, and then exclaimed:

"By jingo! Butler or no Butler, here goes!"

Then he wrote:

"Job White is not to be shot until further orders from me."

"Why," said the old man sadly, "I thought it was a pardon. You may order him shot next week."

"My old friend," replied Lincoln, "I see you are not very well acquainted with me. If your son never dies till orders come from me to shoot him, he will live to be a great deal older than Methuselah."

MY OLD NURSERY CHAIR.

LUCRETIA MARSHALL HUBER.

The nursery blinds are drawn down tight,
Whilst all outside is shining bright;
And I must take my mid-day rest,
Lying soft on nursie's breast.

Nursie rocks me forth and back,
And I hear the old chair crack;
Crickety crack, crickety crack,
Like a steam car on its track.

Up upon the ceiling high
Golden spots of sunlight lie;
Distant "moos" and nearby bees
Murmur on the scented breeze.

Nursie's voice sounds soft and low
Humming songs of long ago;
'Seems the room is growing black;
Through dreams' vistas sounds come back;
Crickety crack, crickety crack.

A CRADLE SONG.

Sing it, Mother! sing it low:
Deem it not an idle lay.
In the heart 'twill ebb and flow
All the life-long way.

Sing it, Mother! softly sing,
While he slumbers on thy knee;
All that after-years may bring
Shall flow back to thee.

Sing it, Mother, Love is strong!
When the tears of manhood fall,
Echoes of thy cradle-song
Shall its peace recall.

Sing it, Mother! when his ear
Catches first the Voice Divine,
Dying, he may smile to hear
What he deemeth thine.

—*John B. Tabb.*

AN EXPLODED MYTH.

UNCLE JACK—"I understand the angels brought you a little brother last night."

Small Bobby (pityingly)—"You'd better come over to school to-morrow and join our class in sex hygiene."

THE NEW BABIES' FAIRY.

BY LOUISE VON WETTER.

The New Babies' Fairy leaned over the pillows,
To whisper her gift to my child.
She thought I was sleeping, my travail just ended—
So faintly I breathed as she smiled.
"Oh, Hope of True Lovers, who longed for thy coming,"
(How gently she touched the wee head!)
"I bring thee a treasure far greater than jewels;
A wholesome sweet spirit," she said.
And lo, she had vanished—the rainbow-winged Fairy,
No humming bird's flight swift as this.
While I held my baby, and lay amid flowers
And dreamed of my True Love's first kiss.

MOTHER O' MINE.

(*Kipling*)

If I were hanged on the highest hill,
I know whose love would follow me still:
Mother o' mine.
If I were drowned in the deepest sea,
I know whose tears would come down to me:
Mother o' mine.
If I were damned of body and soul,
I know whose prayers would make me whole:
Mother o' mine.

THE CHILD MIND.

"WHAT is mamma?" Here are nine answers given to that question by children at the Children's Aid Society's school in West Fifty-third Street:

She's what you chop wood for.
She's what feeds you.
She's what put clothes and shoes on you.
She keeps care of you.
She's who's good to you.
She's your creator.
She's what's dead on to me.
She's a boy's or a girl's mother.

BOOK REVIEWS.

RURAL HYGIENE, by Henry N. Ogden, C.E., Professor of Sanitary Engineering in College of Civil Engineering, Cornell University; Special Assistant Engineer, New York State Department of Health; pp. 434, 77 illustrations. New York, The Macmillan Company.

THIS most excellent book represents "an attempt to put before the rural population a systematic treatment of those special subjects included in what is popularly known as Hygiene as well as those broader subjects that concern the general health of the community at large." We find the modest author's "attempt" to be fully realized; the work is veritably encyclopedic on the subject. Of course it is authoritative, being that of a very experienced teacher and consultant. That it is not all "dryasdust," but written with uncommon literary charm may be judged from this extract: "It is commonly supposed that good health is the invariable accompaniment of country life; that children who are brought up in the country are always rosy-cheeked, chubby, and except for occasional colds, free from disease; that adults, both men and women, are strong to labor, like the oxen of the Psalmist, and that grandfathers and grandmothers are so common and so ablebodied that in practically every farmhouse the daily chores are assigned to those aged exponents of strong constitutions and healthy lives." Prof. Ogden proves this supposition to be erroneous. The book is of the first importance with respect to rural sanitation.

RURAL HYGIENE. A handbook of sanitation designed for the use of students in the agricultural schools and colleges, and for the residents of the rural districts of the United States, by Isaac Williams Brewer, M.D. 22 illustrations; 2nd edition; Philadelphia and London, J. B. Lippincott Co.

THIS superb and most recommendable book treats admirably and adequately of such subjects as Work and Recreation, Dwellings, Schools, Water, Excreta, Disposal, Food and Diet, Milk, Ice, and Contagious Diseases (certain of which have a higher mortality in the country than in the city). The chapter on Alcoholism demonstrates this evil to be by no means only an urban one.

THE MILK QUESTION, by M. J. Rosenau, Professor of Preventive Medicine and Hygiene in the Harvard Medical School. Formerly Director of the Hygienic Laboratory, U. S. Public Health and Marine Hospital Service, Washington, D. C. Boston and New York, Houghton, Mifflin Company.

THIS exhaustive work on a subject of the most vital importance is appropriately dedicated To Nathan Straus, whose generous efforts to assure infants and children pure milk are not yet universally appreciated. The hand of the master is shown in every page of Prof. Rosenau's book. Here is a *vade mecum* for the farmer and the dairyman; and the consumer may find in these pages what he may be up against. The book is abundantly illustrated. The subjects emphasized are, Milk as a Food, Dirty Milk, Diseases Caused by Infected Milk, Clean Milk, Pasteurization, Infant Mortality, From Farm to Consumer.

EXPECTANT MOTHERHOOD: ITS SUPERVISION AND HYGIENE, by J. W. Ballantyne, M.D., F.R.C.P., Physician to the Royal Maternity Hospital, Edinburgh; Author of "Manual of Antenatal Pathology and Hygiene," etc. Large 12mo. 288 pages. Price, $1.50, net; by mail, $1.61. Funk & Wagnalls Company, publishers, New York.

"A NEW discovery calls for a new commandment," is the principle upon which this book is based. By the "new commandment" is meant the hygienic rules which the parents, and especially the mother, must obey if the child is to come into the world well and strong. Dr. Ballantyne, as physician to the Royal Maternity Hospital, Edinburgh, is able to write on this subject with authority. He not only tells the expectant mother what she ought to do and ought not to do, but with singular clearness and charm explains the physiological reasons for the directions he gives. In this respect the book is unique. The expectant mother, he holds, has the right to know more than she has hitherto been expected to know about those secret and silent processes of nature which mean so much to her and to her child.

NURSING DEPARTMENT.

EDITED BY FRANKLIN W. BARROWS, M. D.

THOUGH WIDELY DIFFERING IN FUNCTION, THE ULTIMATE AIM OF THE NURSE IS THE SAME AS THAT OF THE PHYSICIAN, THE RELIEF OF SUFFERING AND THE SAVING OF LIFE. CULTURE, HELPFUL INFORMATION AND A BETTER UNDERSTANDING OF RELATIONS, LEADING TO AN INTELLIGENT CO-OPERATION IN THIS COMMON AIM, ARE THE OBJECTS OF THIS DEPARTMENT.

A GOOD SPRING TONIC.

No man who has once heartily and wholly laughed can be altogether irreclaimably bad. How much lies in Laughter; the cipher-key, wherewith we decipher the whole man! Some men wear an everlasting barren simper; in the smile of others lies a cold glitter as of ice: the fewest are able to laugh, what can be called laughing, but only sniff and titter and snigger from the throat outwards; or at best, produce some whiffling husky cachinnation, as if they were laughing through wool: of none such comes good. The man who cannot laugh is not only fit for treasons, stratagems, and spoils; but his whole life is already a treason and a stratagem.—Thomas Carlyle.

VACATION HINTS.

FORTUNATE indeed is the worker who can round out a year of toil by a few days of rest and recreation. For this pleasure there is no time like the late Spring or Summer. By all means, plan your vacation early and take time enough to choose deliberately the places that you wish to visit, for a well-planned outing brings a double satisfaction —both the prospect and the realization.

In planning your trip you must remember that the vacation has its perils as well as its pleasures and that some, at least, of these perils may be avoided by proper forethought. Many a pleasure seeker has his play-spell cut short by an attack of typhoid, presented him, we might almost say, with the compliments of his host, the inn-keeper or the proprietor of the high class boarding-house. From the viewpoint of the sanitarian these proprietors of typhoid traps are planning for another "run" of their special disease just as deliberately as they are planning for their season's trade. Any hotel or other affair for harboring summer boarders, which does not eliminate from its premises the unsanitary, open privy, the polluted well or other source of water, and every known means of encouraging the presence of house flies—every such place is inviting you to a feast of filth and a bed of misery. No matter what "natural advantages" your chosen resort may present to your tired eyes, if you find there the abominations that have just been mentioned, cancel your contract and get away just as you would get away from a house that is placarded for a contagious disease.

It seems unnecessary to tell people anything more about the danger of harboring the house fly; and yet, you will see many a home this summer tormented and tortured by this commonest of all pests. It is strange, indeed, that all people have not adopted the fly trap as the most sanitary and certain means of clearing our premises of flies. How much longer must civilized communities wait before they take the most elementary steps toward sanitary living, by abolishing from their homes these flying, crawling carriers of disease and filth? It can be done, and is done by those with gumption.

If you are in a position where you are able to fight the flies and protect yourself and your food from their visitation we recommend the plan of campaign outlined in the *Chicago Sanitary Bulletin,* always remembering that the *trap* is the most dependable instrument that you have:

TO FIGHT THE FLY.

Swat the breeding places. Sprinkle kerosene over the garbage daily; sprinkle Paris Green solution over stable manure every day; use an abundance of chlorid of lime in the privy vault and pour kerosene down the drains occasionally.

To fight the existing flies, screen your doors and windows, use sticky papers, traps and

keep dishes of the following solution—fly poison—about the house:

Milk .....1 teacupful
Water .....1 teacupful
Formaldehyd .....1 tablespoonful
Bluing (ordinary) .....5 drops

Mix and pour some of this solution in saucer on which a 1-inch cube of bread has been placed, always keeping surplus of liquid in saucer. The bluing is added to give a color which will deter adults from drinking the solution. Keep out of reach of children.

Fortunately for the prudent pleasure-seeker, the idea has pervaded most resorts that it is a good thing to drink wholesome water. Most of the places which attract large crowds of visitors possess one or more sources of decent water which have passed a favorable analysis. And yet, and always, it well behooves the visitor to be on his guard and take no chances when the drinking water is not above suspicion. Boiling will make almost any drinking water wholesome. Those who are camping or roughing it sometimes want some better means of purifying water, especially if they are without any way of cooling it quickly. Here is a good method of applying the hypochlorite treatment, for which we again thank the *Bulletin*:

TO PURIFY DRINKING WATER.

(*Paste this in your traveling bag*)

Get a few ounces of the best quality of chloride of lime at any drug store and prepare the following

STOCK SOLUTION

Cloride of lime .....1 teaspoonful
Water .....1 quart

Keep this solution in a tightly stoppered bottle; a mason jar or a thermos bottle being well adapted to the purposes, the latter especially when traveling.

Label the bottle "Stock Solution;" show formula as above and add the following directions:

To purify water for drinking purposes add one teaspoonful of the stock solution to two (2) gallons of water.

If the water is turbid strain it through fine muslin before adding any of the stock solution.

After adding stock solution allow the water prepared for drinking purposes to stand *uncovered* for twenty minutes before using. This allows the gases to escape and makes the water more palatable.

Then bottle the prepared water and keep on ice. Never put ice in the water.

Another source of water-borne infections, common to many resorts, is the bathing beach with its nearby sewer outfall. Be sure that the waters you swim in are not fouled with human wastes.

Miss Tufts' Article on vacations for nurses, which we are happy to present to our readers this month, makes many very useful suggestions to those who like the wilder and more primitive kind of an outing. We hope that it may inspire some of our readers to get near to nature before this summer is over. And we hope, too, that our own suggestions may serve to make the vacation more enjoyable by reducing the wear and tear that come from all night combats with insect foes and daily conflicts with flies and the filth that they bear with them. If your fight happens to be with mosquitoes, try the tactics which Uncle Sam suggests.

TO PROTECT FROM MOSQUITOES.

In a Bulletin issued by the United States Department of Agriculture, it is said that the most effective mixture was that sent the Department by C. A. Nash, of New York. It was as follows:

Oil of citronella.....oz. 1
Spirit of camphor.....oz. 1
Oil of cedar.....oz. ½

A few drops of this mixture on a bath towel hung over the head of the bed will keep the common house mosquitoes away. When they are very abundant and persistent, a few drops may be rubbed on the hands and face. Towards morning, it may lose its efficiency, and as the mosquito often bites worse about daylight, when the individual sleeps soundest, it is well to renew the application during the night.

TRAIN TWO CLASSES OF ATTENDANTS.

Everybody knows that there are at least two classes of nurses at work to-day. Why not give them both "official" recognition, since both are in possession of a good business, and help both of them to progress along normal lines of growth? Here is a hint for the hospitals by Leonard Felix Fuld, Examiner Municipal Civil Service Commission, New York City. We quote from the *International Hospital Record*:

Under the present system undergraduate nurses are not subjected to civil service examinations at all, because it is presumed that the statutory regulations regarding the educational qualifications and the ability of a competent superintendent of a training-school will accomplish better results than the im-

personal machinery of the civil service law. When the superintendent is a thoroughly competent administrative officer this system works reasonably well. As a layman, however, I venture the suggestion that the hospitals are not performing their full duty to the community when they train only the highly skilled nurses who are graduated at the present day. Nurses possessing the preliminary educational qualifications demanded by our statutes and the technical qualifications required of them before graduation from the training-school generally demand a fee for their services which the poor man is unable to pay, and which it is a hardship for the man of the middle class to pay. The hospitals should train two classes of attendants for the care of the sick: trained nurses, possessing all the qualifications possessed by trained nurses of the present day, and trained attendants, who lack some of the preliminary educational qualifications and some of the higher technical skill of the trained nurse. In this way they could furnish attendants who have been trained in a hospital and who could do much to improve the condition of those members of the community who, when sick, are unable to command the services of a trained nurse. During their course of training in the hospital, these attendants will be able to assist the trained nurses; and, after their graduation, they will be able to extend the benefit of trained attendance on the sick to those who are wholly unable, or unable without serious hardship, to employ and pay the regular trained nurse.

THE PROPOSED PROTECTION OF THE WORD NURSE.

WHILE the Seeley Bill for the amendment of the Nurse Practice Act in New York State has failed to pass the Legislature, the agitation in favor of "protecting" the good old word *nurse* continues to attract the attention of readers of authorized nursing literature. After this long and warm campaign with its luminous hearing at Albany, there still appears to be more to say in the way of argument and persuasion. The *American Journal of Nursing* in its last issue, gives a generous allowance of editorial space to these arguments, "because, whether New York carries its measures at this time, or not, the question is one that will come up in other states, and that must be before the nursing profession for many years until the word Nurse is absolutely protected." In other words, the *Journal* announces that the profession does not intend to let up on this campaign "until the word Nurse is absolutely protected." And so, the legislature that defeats this protective measure one year may look for another siege the year following!

We like this frank announcement better than some other features of the campaign just closing.

Facing this prospect we have no right as partisans to delay the settlement of this important question by ignoring or suppressing any of the arguments pro or con. Our only interest is that the right may prevail, for we believe that no question is settled until it is settled right. To this end we would have every interested reader of the GAZETTE fully posted by reading all the available arguments on both sides of the question. By all means read *The American Journal of Nursing*—you will never find it presenting more than one side, and that the side of the official circles. Read also the little pamphlet which bears the seal of the New York State Nurses' Association and is entitled: "Some reasons for the proposed amendment to the Nurse Practice Act." We would also take the liberty of quoting from the *American Journal* the suggestion that those especially interested in legislation may obtain from Miss Littlefield, of the Homeopathic Hospital, Albany, N. Y., a copy of the brief prepared by John F. Farrell, counsel, of Brooklyn. This brief "is a summary of legal opinions at the time the use of the word Physician was restricted to those who were educationally qualified to practice medicine." By all means, gentle reader, get these articles and study them. Haven't we given you a fair chance? But before your enthusiasm runs away with you be sure to acquaint yourself with the other side—for you know that every practical question has *two* sides and some are many-sided.

It seems to be the office of the GAZETTE to show up the other side, or sides, of this proposition—not because we are opposed to registration, for we have always advocated registration for all nurses. But while favoring registration we have always tried to remind the nursing profession that it is not and can never be a cure-all for the evils that beset the path of the educated nurse. The present campaign, with its nerve-racking contentions merely proves our point. See if it doesn't.

Ten years of State Registration in New

York have conferred on the select nurses of the State their exclusive right to the use of the title "Registered Nurse," denoted by the symbol R. N. Many nurses have availed themselves of this right. Many have not. Because of those who have *not* registered presumably, the Nurse Practice Act has failed to fulfil the predictions of its early advocates. A new remedy is proposed, said to be a sure cure for the evils resulting from the competition of unworthy women who *can not register*. This remedy is nothing less than the taking from these women of the name Nurse—the name by which they have always been known in common with all men and women who have special care of the sick. The word is about as old as the word Mother.

We now have the spectacle of the *Registered* Nurse, who has enjoyed her special privileges for ten years, asking the legislature to give her the monopoly of the word Nurse. This, we are told, is "the legal protection of the word Nurse."

While we are about it, let us "protect" the word Teacher, in the interests of the thousands of certificated teachers who are striving to raise the standards of their profession. Let us enact that no one who teaches anybody anything in the State of New York shall be allowed to do so as a "teacher" without first having secured from the proper authorities a license entitling him or her to the use of this protected term. Such a law ought to make all genuine teachers feel a lot better!

The protectors of the word are harking back to the days when our state legislatures, some of them, restricted the use of the word Physician to those possessing certain qualifications. So they did. This word lent itself easily to such protection, because it was not the common word by which practitioners were known. There are thousands of people in our large cities to-day who do not know what the word means. But will any one tell us when or where in this country the use of the word "Doctor" has been "protected" in the interest of the profession, the public, or anybody else? Doctor means almost anybody, from the cook in a logging-camp to the D. D. in a cathedral. It is too broad a term to be "protected" in the interests of the medical profession, and the physicians were contented when they secured the exclusive right to use the title, Doctor of Medicine. Unless we are greatly mistaken, our friends, the nurses, will have to be satisfied with the distinction, Registered Nurse, fully "protected" by their own Nurse Practice Act.

Before leaving this subject, we propose to quote several articles bearing on this proposed "protection." The first is by the venerable Dr. A. Jacobi, of New York City, a man to whom the medical profession has accorded the profoundest respect for many years, a leader whose voice is always welcome in our medical councils. We quote from his letter in the *New York Times* of February 21.

UNIONISM IN NURSING.

To the Editor of The New York Times:

Senate Bill 207 regarding the use of the word "nurse" seems objectionable for a good many reasons. The exclusive use of the word "nurse" by a certain class of persons is contrary to the ruling of the dictionary of the English language. Webster's unabridged defines "nurse" as a "person, especially a woman, who has the care of the sick or infirm." That is why a special class of nurses or an association requires a distinguishing title. Their claims may be recognized, and no objection should be raised to their calling themselves "trained" or "registered" or otherwise. Such a title should then not be used by those nurses who are not entitled to use it by previous training in hospitals or sanatoria extending over protracted courses of instruction.

But this latter class of nurses proves very useful to those who cannot afford to pay large weekly wages. That class of patients is very large. Protracted cases of illness are apt to cause a financial ruin to families of small or moderate means. Their nurses must not be in danger of being prosecuted or persecuted by the New York State association of "trained nurses" who claim the right to examine and certify and prefer charges and recommend revocation of licenses.

By passing Bill 207 the Legislature will restrict the rights of our citizens, male and female, who would be deprived of their own rights and privileges in favor of a privileged class of high-priced nurses. The object of Bill 207 is the creation of a "union," with all its preposterous and detrimental prerogatives which, as our lawgivers know too well, are the stumbling block of an equable and legitimate development.

That "unionism" is the more unreasonable the more one considers the fact that the trained nurse owes her education to the generosity of the hospitals, both public and private, and to the gratuitous and unselfish prolonged practical and theoretical teaching of the doctors.

The American Journal of Nursing, in its editorial account of the hearing before the Public Health Committee at Albany, on Feb. 17, mentions among those who opposed the Bill, "a Miss Fiske who, though a college

graduate, spoke against education as desirable for the nurse." Having had some experience as an editor, we can't understand how the representative of the *Journal* happened to overlook the fact that Miss Annette Fiske, A. M., R. N., is a graduate of the famous Waltham Training School which has been commended highly by more than one State inspector in the Empire State, and that she is on the editorial staff of the *News Letter,* besides having written extensively on nursing topics. Of course it is natural for an inexperienced reporter to overlook such little details as this when fussed up over a "hearing"; but we are sorry that it happened in New York State, and although we are not exactly authorized, we make this little apology for the *Journal.*

We want to reprint an article which Miss Fiske contributed to the *New York Evening Post* for February 12. We are afraid readers of the *Journal* exclusively will not see it, although they may *possibly* take a peek at the GAZETTE. It is useful sometimes to get the views of some one outside of our own State of New York.

TRAINED NURSES AND THE PUBLIC.

There is a prospect, apparently, that a bill to confine the use of the term "nurse" to graduates of registered training schools for nurses will again come before the New York Legislature; although its professed object is the protection of the public against incompetent nursing, it is difficult to see where the protection comes in, especially as the term "registered nurse" is already legally confined to this very class of graduate nurses.

What is needed is not the restriction of the use of the general term "nurse," but a law that shall cover all the workers in the nursing field, giving each her status and enabling the public to know what grade of nursing service it is getting. Is the graduate nurse alone dangerous to the public, that the law regulates her work and training, but makes no attempt to regulate the activities of the lesser trained or wholly untrained nurses whom many are, for financial reasons, obliged to employ?

To be sure, it was claimed that the present law for the registration of nurses would close the correspondence schools, whose course is brief and largely, if not wholly, theoretical; but it is an interesting fact that the number of young women graduated from one of these schools alone was 3,000 in 1912, as against 200 in 1903, the time of the passage of the law.

The trouble with the nursing legislation in New York State is that it has not really been framed to protect the public, but to give power to a few nurses, the so-called "leaders," and to create an aristocracy of nurses. The present law, as passed, was a just one, making the requirements for registration twenty-one years of age, a good moral character, and two years in a training school maintaining "proper standards." Such requirements, if fairly interpreted, allowed sufficient leeway to admit of the inclusion of all graduate nurses in high standing and the exclusion of the incapable; but the term "proper standards" used in the law has now been defined in such a hard and fast manner that a prominent school, whose training both the inspectors of training schools in New York State have at different times praised as highly satisfactory, is to their regret (?), unable to register. Thus has the law been manipulated by the "leaders."

Nominally, the body which defines the requirements of the law is the Board of Regents of the University of the State of New York, a board composed wholly of men, only one of whom was, at last accounts, a doctor of medicine—the rest being doctors of philosophy, literature, and the like. Of course, such men have no practical knowledge of nursing, and must turn for advice to the nurse examiners, five nurses appointed by the New York State Nurses' Association from their own numbers. It is the influence of these women, or of the "leaders" through them, that is distinctly seen in the final interpretation of the law.

There are two stipulations in particular that work hardship to training schools and tend more to the injury than the protection of the public. The first is the educational requirement for the admission of probationers, the second the refusal to allow the sending out of pupil nurses before the third year of training and then only for three months.

In the New York educational requirement is one year of high school or its equivalent, and the "equivalent" is not left to the judgment of the superintendent who sees and talks with the applicant, but must be referred to the authorities at Albany. The difficulty with this requirement is that, owing to the great increase in the number and size of hospitals these last years, there are not sufficient applicants with this qualification, to say nothing of their being temperamentally fitted for nursing. Yet the "leaders," while admitting this fact, ignore the evident consequences, and are now demanding the adoption of the full high-school course as a requirement. In this they have the sympathy of the public because to the average lay mind a high-school education seems a reasonable requirement for the nurse. If it were possible, it would be. The only difficulty is that it is impossible at present.

Moreover, the personality of the nurse is an even more important factor than her education, and it is not always the more highly educated woman by any means who makes the best nurse. Other things being equal, the better educated woman will make the better nurse, but insisting on a higher educational standard than can be maintained in practice merely means a short supply of nurses in the hospitals, with overwork and slighted care of the sick; the shutting out of good schools, and competent graduates from registration, and the driving of good

material in the way of capable women of lesser education into the correspondence and other short-course schools, with the consequent loss of good material in the recognized schools.

As for the sending of the pupil outside the hospital on district or private work, the "leaders" profess to regard it merely as a means of making money for the hospital. It may be done in places with that in view, but its chief use is to accustom the pupil to work in the home before her graduation, to teach her tact in dealing with the family, and ingenuity in getting along without all the apparatus provided in the modern hospital, and to enable her to learn her weak points while she is still in training, and can remedy them. If she is sent out early enough in her training, say at the end of the first year—under careful supervision, of course—it prevents her becoming a purely hospital machine, and the patient is in no more danger from her ministrations than he would be in the hospital. She certainly should be less dangerous than the wholly untrained nurse. District nursing associations have already found experience in district nursing almost essential as a part of the training of the nurse, and the public will soon wake up to the need of the nurse having experience in private nursing while yet a pupil as a means of eliminating that too common bugbear, the hospital nurse.

Nursing legislation is not, or should not be, a matter of interest to nurses alone. It affects the public very vitally, and they should see that the laws and their enforcement do not rest wholly with a few interested nurses, but they themselves get representation through such capable members as doctors and hospital trustees.

Our next citation will be an editorial by Dr. A. L. Benedict, in the *Buffalo Medical Journal.* He also manifests a very genuine respect for the English language.

THE BILL TO RESTRICT THE USE OF THE TERM NURSE.

The essential point of criticism in this bill is that by forbidding any but a registered, hospital graduate to call herself a nurse, it is virtually legislation against the dictionary. The word *nurse* as a general designation for anyone caring for a child or sick or injured person is practically as old as the English language, in fact some centuries older than English understandable by one who speaks that language to-day. An equivalent word occurs in most languages, ancient as well as modern, having the same general sense, so that it may fairly be stated that the word *nurse,* as a general designation, dates back to the dawn of civilization.

It is difficult to state just when the conception of the *trained nurse* originated. It is commonly dated back to the experience of the Crimean War, but, on the one hand, some degree of formal training of nurses, especially in sisterhoods, antedated this War by several centuries and, on the other hand, the *trained nurse* in the present sense, as a generally available aid to the physician and surgeon and as representative of a definite profession, did not arise till the seventies and eighties of the last century.

Sufficient time has elapsed, however, to produce a large, influential and capable body of active and retired trained nurses. The general requirements for the education, registration and legal control of this profession can now be best formulated by this profession for itself.

Objection to the bill in its present form is not an indication of prejudice for the untrained nurse, but fear that it will react to the detriment of the trained nurse. We doubt very much whether any court will rule that it is a legal offense to use a word in its accepted and long established sense. We feel very certain that no court will punish, to any sensible degree, anyone who calls herself a nurse, unless it can be clearly shown that she practiced deliberate deception by qualifying the word with such an adjective as "trained" or "hospital" or "registered." And we feel equally certain that any organized attempt to enforce the law will simply strengthen the opposition to the trained nurse. The contention that the laity do not understand the difference between a trained and an untrained nurse can scarcely be upheld.

Why not accept conditions as they exist, recognize that the trained nurse is alone susceptible of professional organization and development, and seek such legislative control of the noble profession of trained nurses, as their own experience dictates, letting the dictionary and the practical nurse alone?

THE REAL AIM OF THE BILL.

The *Trained Nurse,* editorially speaking, claims to have discovered the "real aim of the bill," and we hope the claim can be substantiated. At any rate, this magazine makes a number of very sensible observations, with one of which we close this instalment of comments on "protection."

The real aim of the bill would seem to be, as Dr. Herman Biggs implied, to make nursing an independent profession, something it can never be, in the very nature of things. But if such an object is desired, the way to reach it would be, not to forbid the use of the term *nurse,* but the performance of *nursing service,* which it has been particularly stipulated the law is not meant to do. We are surprised that this point has not been brought out more forcibly. No one knows better than those supporting the bill, that it is impossible as well as undesirable to try to prevent the nursing of the sick by any but registered nurses. There are not enough registered nurses to care for the sick in the homes, and nine-tenths of the people could not afford them if there were.

PLEASANT AND INEXPENSIVE VACATIONS FOR NURSES.

By Mary H. Tufts, Farmington, Maine.

When the nurse gets time for a vacation, she needs above all things to have an entire change of scene, and to spend as much time as possible in the open air.

As a rule it is not wise for the nurse to accept entertainment from former patients, during her vacation. It is better for her to co-operate with a congenial party of nurses or other friends; each sharing their proportional part of the expense for the vacation.

A pleasure shared is a pleasure doubled; and if the members of such a party be perfectly congenial, such a co-operative vacation is most enjoyable.

As a rule, nurses do not feel financially able to spend the vacation at the expensive hotels or sporting-camps. But the place to which one proposes to go should be carefully investigated, to be sure that it is desirable, and meets the needs of the vacationists.

Certain things must be considered: the vacation place must be reasonably near a village and stores and post-office; for unless one is boarding at a farmhouse, hotel, or sporting-camp run on the hotel plan, one must usually walk to the nearest settlement for supplies and mail.

I know comparatively little about camps and cottages in States other than my own; so I will write only of these.

However, "The Vacation Bureau,—New England Lines,—Room 796,—South Station, Boston, Mass.," will gladly furnish information in regard to all sorts of accommodations throughout New England, if one will apply to them by letter, and state just the locality and kind of accommodation which they desire, and about what price they wish to pay. This bureau will send attractive booklets containing much information as to traveling expenses from the large cities to different resorts, and prices for board, guide-service, and boat-rental, etc.

Very good farm-board may be obtained in my State for $1. per day; and in some instances, if two share a room, may be obtained for less than that during the months of May and September. Some people who do not generally take boarders, may be prevailed upon to take two or three persons at the rate of $5. per week.

There are some small boarding houses also, which charge but $1. per day; but unless one is to spend the vacation at the sea-shore, I would not recommend that kind of a vacation for the nurse.

One of the most ideal plans with which I am acquainted, is for a party to lease a camp or cottage, fitted up for housekeeping; and to share the expense, and housekeeping duties. I know that one may in this way have an inexpensive and very happy vacation.

Many of the camps and cottages in this and other States, are run on the hotel plan, i. e., the campers have rooms or a whole camp to themselves, according to size of the party; and get their meals at a large main-camp. The prices at such camps range from $2. to $4. per day; services of a guide cost from $2.50 to $7. per day, and sometimes at these prices, they will furnish a boat, and part of the equipment for camping out of doors. Use of boats at such camps is 50c per day. Thus it will be seen that the expense is considerable.

But with the little "housekeeping" camps and cottages, a party of four or five may live as cheaply as $5. per week, each; with use of one boat, firewood, and ice included.

There is always some reduction made for the month of September; and as the law permits of fishing until well along into September, in many States, one may have as good a time then as earlier in the season. If one is to camp inland, "in the woods" so to speak, there is a decided advantage in waiting until September; for then the mosquitoes and black flies will be much less numerous.

A camp or cottage of this kind, large enough to accommodate four or five people, may be had for the month of September at from $25 to $30 per month. A larger camp will cost in the neighborhood of $40 for the month.

In some of these, the bed-linen is furnished; but usually the campers must furnish their own bed-linen, table-linen, chamber and dish-towels, etc.

Some of the camps have but two large rooms; one above-stairs and one below. Usually there are sleeping accommodations for four or five persons; the beds are double; and are supplied with springs, mattresses, pillows, and blankets or comfortables. Curtains separate the beds, where more than one bed is in a room. The other

bedroom furnishings usually consist of commodes, toilet-sets, and a chair for each room.

Downstairs in the small camps, the space may be divided into two rooms, or, may be all in one large room. The furnishings usually consist of cook-stove, wet-sink, kitchen table and dish-closet, ice-box, dining table and chairs, living-room chairs and rockers, living-room table and lamp, living-room stove or open fireplace, lamps and lantern, wash-tub, boiler, sad-irons, dishes, knives, forks, fuel, ice, and use of one boat.

Some of the cottages also have a cool cellar beneath them; with a dumb-waiter up into kitchen.

For sanitary reasons the cottages are usually 5 or 6 rods from the source of the drinking-water supply; except in a few instances, in which the drinking water is brought into the cottage by piping.

A piazza affords a place for the hammock; which is so necessary a part of a vacation; but the hammock must be supplied by the campers.

If a party of nurses takes such a camp, it is wise for them to plan the selection of supplies for cooking, the furnishings which they are to supply, and the housework carefully. A well-planned "system" will not only keep expenses within bounds, but simplifies the work very much.

Quite often common table-linen may be borrowed of one's family; also inexpensive silverware, if that is desired. Most nurses have plenty of bath and chamber towels, and probably wouldn't have to buy those for camping.

It is so often a good plan for the cooking to be done by some one person in the party who has had experience in buying and cooking.

But each one should be willing to do her part of the general camp work; and when so divided, the work will not seem hard.

If none of the nurses are skilled with the oars, they will need to hire someone to row for them when they fish. Most row-boats accommodate but four people; so if a guide was hired, it would cost each nurse about $1. But often some person (not a Registered Guide) may be hired for rowing, at much less than that.

The fish and game laws are strict in most States; and each nurse in the party should obtain a copy of the fish and game laws, and study them carefully before engaging in fishing or camping. A copy of these laws may be obtained from the Chairman of the Commissioners of Inland Fisheries & Game, of the State in which one proposes to fish or hunt.

If one wishes to fish or hunt, an outfit must be bought before going on the trip. For the appropriate outfit for different kinds of fishing and hunting, one must consult someone experienced in such matters, or get catalogues from some reliable sporting-goods companies, and select the outfit from those.

Among the large companies dealing in such complete outfits may be mentioned Abercrombie & Fitch Co., and Schoverling, Daly & Gales of New York; H. H. Michaelson, and David Abercrombie Co., of New York; New York Sporting Goods Company; Iver-Johnson Sporting-Goods Co., of Boston, and the T. B. Davis Arms Co., of Portland, Me.

There are almost numberless companies of this kind; but these few addresses occur to me at this time.

For nurses who have a chance to sew for themselves, it is desirable that they make the garments for their outfit. A convenient clothing-outfit for camping in the woods or at the small inland lakes and ponds, is made up as follows: An outing-suit made of stout cotton goods as khaki, "Dux-Bak," or "Kamp-It" cloth; a pair of leggings of heavy cotton material to match suit in color; 2 pairs of bloomers, made of cotton pongee, brown or tan gingham, or fine gray or tan linen or linene; a plain hat of linen, khaki, or duck; 2 colored cotton or silk handkerchiefs for the neck; a pair of high boots having thick soles, low heels, and laced. These are best of tan leather; and should be thick, for rough wear; plenty of stockings and underwear; a pair of old, loose corsets; bathgown and slippers; 2 night-robes (preferably of outing-flannel, as nights near the water are often chilly); a dark-colored sweater; a common wool skirt and 2 or 3 washable shirt-waists to wear with it, about camp; 1 print or gingham wrapper or housedress; handkerchiefs; a good supply of complexion lotion for sunburn; a few simple remedies for headache, toothache, and for catharsis; some good mosquito and fly dope; a cake of foot-soap, and toilet soap; towels and bathcloths; a sewing-bag fitted with needles, pins, emery, tape-measure, thimble, thread and silk, an assortment of buttons, embroidery-frame and fancy-work; and any little extras desired, outside of the necessary fishing-tackle or hunting outfit.

Those who are interested in botany or mineralogy or photography, will find ample scope for these pastimes, on such a camping trip; and should bring necessary outfit with them.

A field glass is a source of pleasure, especially on long tramps over the surrounding country.

A few books and games will help to pass away the time on evenings or rainy days.

I would like to talk more at length of the joys of a vacation at camp in the woods; but will quote from Kipling,—

"Do you know the blackened timber—do you know that racing stream
With the raw, right-angled log-jam at the end;
And the bar of sun-warmed shingle where a man may bask and dream
To the click of shod canoe-poles round the bend?
It is there that we are going with our rods and reels and traces,
To a silent, smoky Indian that we know—
To a couch of new-pulled hemlock with the star-light in our faces,
For the Red Gods call us out and we must go."

THE IDLE THOUGHTS OF AN OPTIMIST.*

By Henry Jones Mulford, M.D., Buffalo, N. Y.

I am deeply honored at being permitted to address you. After your committee had waited upon me the other day I rushed out to tell the news to my wife, and I said to her: "What can I say to those girls? How can one man keep so many women quiet for a whole half hour?" "Oh," she replied, "tell them how to get married, and be happy!" Do you catch the subtle compliment in that remark? Tell them how to get married, *and be happy!* No one but a happy wife would have said that.

But, after all, there are various degrees of married happiness, the degree depending upon both parties to the contract. Here is a little poem which shows one side of the question. The title of the poem is—

The Echo.

(From *Puck.*)

I stood within a wooded glen
Before a mountain wall,
And, ringing to my ear again,
The echo mocked my call.
"O Spirit of the Glen!" I cried,
"Will all be bliss divine

When fast the nuptial knot is tied,
And Phyllis shall be mine?
Beneath the lamplight's rosy glow
At even shall I sit
And watch her fairy fingers sew,
Or mend, or hem, or knit?"
And Echo answered "Nit!"

"When to my cozy home I haste
For dinner or for tea,
What dainty dishes rare of taste
Will she prepare for me?
Of 'boarding out' I've had my fill,
My appetite's a-quiver.
O! say, what precious morsel will
Her skill to me deliver?"
And Echo answered "Liver!"

"In peaceful, placid streams of love
Will all our moments flow
As clear as Summer skies above,
Or Summer seas below?
Will both our natures sweetly chime?
Will all be perfect quite?
What will we do, O! Spirit? I'm
In love a neophyte."
And Echo answered "Fight!"

"And will I rule the roost?" said I,
"And always have my way?
And will my precious Phyllis try
To honor and obey?
Shall I be leader of the band?
Or, will my rule be wrecked?
I pray thee, tell me how I stand
To her in that respect!"
And Echo answered "Pecked!"

What a woeful picture of wedded bliss that is! I fear Echo is not an optimist! And now I'll tell you something about the other side; here are some stories about husbands, but, far be it from me to say that these stories are true!

Mr. and Mrs. Smith were discussing their neighbors.

"What a nice husband Mrs. Sherman

*An address given before the Graduating Class at the Erie County Hospital Training School, February 20, 1914.

has," said Mrs. Smith. "He is so thoughtful and so tender, and they have been married over ten years."

"Humph!" grunted Mr. Smith. "Any man would be tender after being in hot water for ten years!"

Mrs. Murphy was getting the children's dinner one Saturday when a young man appeared at the door.

"I am collecting for the Drunkard's Home," he announced. "Can you give us something?"

Mrs. Murphy looked at him a moment, then replied:

"Come around to-night and I'll give yese Murphy."

The other day a clergyman was talking with one of his parishioners who was very much down in the mouth.

"You say you have nothing to be thankful for," the clergyman exclaimed, at last: "Why, man, look at your friend Hayes. He has just lost his wife, after a most trying siege of illness."

"Well," replied the man, "that doesn't do me any good. I ain't Hayes."

I am glad to hear you laugh, but I am not telling these stories just to make you laugh. They point a moral. If you must follow my wife's advice, *if you must get married,* be sure that you marry a *man.* Do not marry a spineless individual, do not marry a drunkard, do not marry a brute. Now, I know what you are going to ask. "How are we to know how the men we choose are going to turn out?" What a question to put to a mere man! But, I can answer it! Some might tell you to use your instinct, but instinct, even a woman's instinct, is of doubtful utility, after all.

A boy said to his father: "Say, Dad, what is reason?" "Reason, my son, is that which enables a *man* to determine what is right." "And what is instinct?" the boy asked again. "Instinct? Why, instinct is that which tells a *woman* she is right, *whether she is or not.*"

So, do not put too much trust in instinct. Instinct is only unconscious brain action and depends upon precious experience; it is not a supernatural attribute which has been given to us for our guidance. It is, merely, that the brain cells act before we are aware, but they cannot act if they have no knowledge of the matter before them. Now, a woman who is choosing a husband is doing something in which she, as a rule, has had no experience, and, having had no experience, her brain cells have nothing upon which to base a judgment. You will see, then, that instinct is blind, almost as blind as love itself. One who trusts to it will make as many mistakes as the one who trusts to Cupid. Choosing a husband is like choosing an egg: You do not know whether the egg is good or bad until you take it home and break the shell. In the same way one does not know what is in a husband until one takes him home and lives with him, breaks his shell, as it were. There is one very important point to be remembered in this connection; a husband is not always to blame for the way he turns out. You know, a man's companions help to develop him, and it may be, therefore, that the wife is to blame for the faults of the husband, *sometimes.* But, I said a while back that I could tell you how to choose the right man for a husband, and I will tell you now: Choose an optimist. Choose an optimist and you *will* be happy, *for an optimist can do no wrong.* But a word of caution before *you* marry. Remember, *your* marrying is going to spoil good nurses! We cannot spare our good nurses; we need them all. The doctors need them and the patients need them.

A friend of mine who recently returned from Europe met a lady friend upon the street.

"Why, how do you do, Miss Smythe?" he cried. "And how is your father? John wrote that he was ill."

"Poor father!" sighed the young lady; "we lost him?"

"Dear me! is that so?"

"Yes, the nurse married him!"

I overheard a bit of a conversation on the car one day last week. One man said to another: "Is Charlie out of danger yet?" "No," returned the other; "that pretty nurse is still with him."

There are dangers in all professions, but, in that of the nurse there seems to be more than in any other. There is the danger of mistakes in the sick room; there is the danger of taking the patient's disease; and there is, it appears, the danger of taking the patient himself!

Those of us who traverse the darker paths of this Earth have to carry a double burden: our own as well as that of the person whom we are serving. And often, this double burden seems almost more than we can bear.

We become weary, and then we become depressed. Bodily fatigue crowds upon our mental unrest and intensifies the latter; the brain participates in the fatigue of the body; body and mind react, the one against the other, and, soon, we are in almost as bad a condition as our patient. There are two remedies for this state of affairs. One is the time honored one of sleep, that blessed unconsciousness that brings rest after a day full spent.

"Whatever stinging brambles have beset
The day's hot lane, to wound our weary feet,
Here, at Night's river, let our souls forget—
The Bridge of Sleep is still, and dim, and sweet;

And, at its farther end, the clear-eyed Morn
Waits, with her silver rod, to point the way
Where Hope's rose-hearted blossoms, newly born,
Replace the withered flowers of to-day."
—(*Harriet Whitney Symonds*) *Ainslie's.*

But there is another remedy than this, another and a better remedy. Sleep gives rest, *physical* rest, but it does not annihilate the burdens of the mind. We sleep, but, when the new morn breaks, we arise and take up our burdens as before. The burdens are still there, and each day's recurrence but adds to their weight. The real way in which to remove such burdens is to become an optimist. *An optimist has no burdens,* no burdens of his own, and he gives no burdens to others. The optimist says to himself: *"I will look up, and laugh, and love, and lift."* You never heard anything more beautiful than that! "I will look up": *my ideals shall be above me, and mine eyes shall seek them out;* "and laugh": *I shall go about my tasks with a smile, and my smile shall be for my enemies, if I have them, as well as for my friends;* "and love": *I shall love, and there shall be no room for hate;* "and lift"; *I shall lift mine enemies, those that hate me, and I shall lift my friends, those who are in trouble.* "I will look up, and laugh, and love, and lift!" What a text! Anyone living up to that text lives within sight of his God. He lives upon the heights, but, because he does he does not ignore his fellow beings below. No, he does not ignore them; *he takes them with him.*

But I see that you are becoming impatient. Just what *is* an optimist? you ask. You have been talking about this extraordinary being for a long time, but you have not told us what sort of an animal he is. Well, there are many definitions of an optimist. The one most common is this: An optimist is one who sees always the bright side of things. Another one, but one for which I do not vouch, is: An optimist is a man who believes that every woman with golden hair is a natural blonde! But that is being gullible, is it not? Now, my own idea of an optimist is this: *An optimist is one who always has a smile for himself.*

That sounds a bit like selfishness, does it not? But it isn't selfishness; it is thousands of miles from that, thousands upon thousands of miles; it is eternally removed from selfishness, *because it is everything that selfishness cannot be.* The one who always has a smile for himself will always have a smile for others; for he who can smile in the face of his own troubles surely can smile in the face of the trouble of another. It is easy enough to slap a friend upon the back and to cry, "Cheer up!" but, how difficult it is to cheer the labored heart when that heart is thine own! how difficult to check the tears in thine own eyes! But, if we can reassure others, why cannot we reassure ourselves? We can, *if we be optimists.* All that we need to do, after all, is to remember that behind every storm there is the calm; behind every shower the rainbow. *All that we need is the vision of the optimist: the vision that sees.* With that vision we can laugh as the storm rages about us; can smile as the rain beats against our faces; for then, our eyes can perceive the peace following in the wake of the one, and can catch the glint of the rainbow colors through the raindrops. The rainbow colors! Those colors everywhere manifest in Nature's dress! The fresh glad colors of the Springtime; the colors that blossom anew over the face of the earth every year. Springtime; named in Japan cherry blossom time!

"A yellow raft sails up the bluest stream,
And cherry blossoms cloud the shore with pink.
The sky grows clearer with a curious gleam,
And boys come playing to the river brink.

A grayish gull descends to preen and prink—
Far off a singing plowman drives his team—
A yellow raft sails up the bluest stream,
And cherry blossoms cloud the shore with pink.

Oh, to be there—far from this tangled scheme
Of strident days, and nights that flare and sink!
Let Beauty lift us with a colored dream;
And, as we muse, too rapt and wise to think,
A yellow raft sails up the bluest stream,
And cherry blossoms cloud the shore with pink.

—(*Louis Untermeyer*) *Smart Set.*

Spring in Japan! Spring everywhere! For everywhere are the same colors; the same colors only arranged in a little different fashion in the different regions, as the God of each locality may direct. There may not be a yellow raft on the edge of which we may sit and dangle our bare feet in the bluest stream; but there will be the Spring flowers and there will be peace. But, alas! this may not last the whole year through. Spring flowers fade, and bluest streams freeze over! Now there *is* a region where the cherry blossoms bloom eternally, where it is always Spring; but that region is not a part of the material world. That region is the mind of the optimist. The optimist; he of the exalted vision!

What a gift such a vision is! what a gift! And to think that all of us may have that gift for the asking! It is a thought of mine that man was given two eyes because there are two sides to life, a good side and a bad side; and we need one eye to perceive the good, and one to perceive the bad. The optimist can perceive only the good, *for he is blind in the one eye.* Blind in one eye! you will exclaim; but how can we become optimists? We are not blind. No, you are not blind, not in that way, more's the pity; but you easily may become so. If you wish to practice optimistry, if I may be allowed to coin a word, all you have to do is to shut one eye, *the bad one!* And which is the bad one? Why the one on the right side; the good eye is the one on the left, *on the heart side.* Every optimist must have a heart behind his eye, a heart whose rhythm is the rhythm of joyousness, for, without such a heart, even an optimist will fail in his endeavor.

It would seem, at first glance, that the nurse is the last person in the world to become an optimist. She faces always sickness and trouble, and, facing them, she can see little beyond them. She carries that double burden of which we spoke a while ago. But, even under this handicap, the nurse may, if she will, become an optimist. She needs but to close the one eye while with the other she searches out the smile within her own heart.

I want to reveal to you an idea that has been in my mind for some time. The idea is this: that social service might be associated with nursing. You know social service is a service through which we are supposed to help one another; a service from those who know to those who do not. It was designed, primarily, for the purpose of improving the condition of the poor, and to give an occupation to certain idle women. Under this impulse rich women may be induced to visit the poor under the idea that they are uplifting them; and they are, for the idea is a splendid one. But it is a mistake to think that the poor are the only ones in need of this service. Some of those same rich women are very much in need of it; in fact, there are times when we all need it, when we all need the help of our friends. Now, why isn't the nurse just the one for this service? She goes everywhere, into the homes of the rich, and into the homes of the poor. And she finds discord in all households; often a discord that seriously interferes with the recovery of her patient. The nurse, through her position, may observe, and, through her close intimacy with the household, may advise. Often the right third party may work wonders in such a household, but it *must* be the right party. Here is where an optimist would be in her element, for it is here that the way of the optimist is the best way. One must proceed gently, without the person most interested being aware of the process. One cannot do as the young matron did who was making her first social service call upon a poor woman. The poor woman did not seem over pleased to see her, and this added to the embarrassment of the visitor. After a few moments of uneasy silence the visitor blurted out: "Does your husband get drunk?" The woman addressed frowned and retorted: "No, does yours?"

Now, that is *not* the way to make a beginning in this work. You do not start in by saying to your patient: "I know that your husband beats you. Can't I speak to him about it?" No, that is *not* the way. God forbid! You begin by saying—*nothing!* First of all you must win your patient's confidence, *and, then, she speaks.* Your smile, your happy heart and your gentle touch are the things that win: these things give the measure of your usefulness in this service.

Do not attempt it if you have not these attributes, for the absence of them will make of you only a blunderer.

Your smile, your happy heart, and your gentle touch! We have spoken of the smile, and of the happy heart, but the gentle touch; what of that? The gentle touch, *your gentle touch;* the touch of a woman's hand. Do you appreciate what that touch may mean? what that touch is? Why, it is a most wonderful thing! *It is the greatest force in the world.* There is nothing like it anywhere. It possesses the gentleness of the Summer breeze, and it possesses the rending force of dynamite; it brings forth and it destroys. The touch of a woman's hand; *the touch that may make or mar a man!*

Woman is the "amen" of creation—that is, *the last word.* You all understand this, for you all are women, and, being women, you understand about the last word. All husbands understand about it, too; but only from hearsay. They never have been able to get within speaking distance of it themselves! But we allow woman many special privileges, knowing that whatever she does is for the best. Woman is the last of all created things, and, being the last, she is the best, following the rule of that ancient saying: "The last is best of all the game." And, so, being the best, we expect the best from her. I have told you quite a few things about the optimist; about his superb attributes, and all; and now I tell you that woman is everything that the optimist is. She is not yet quite aware of her own attributes, but she is beginning to understand. She is beginning to understand that she holds the whole world in the hollow of her hand; that the future of man is as she wills; *that it is her touch that is to determine the welfare of the race.* Ah, that touch! The touch of a woman's hand! The touch that can make or mar a man! No! not the touch that is to mar him: *the touch that is to make him!*

CORRESPONDENCE.

In communicating with The Gazette always send your name and address. They will not be printed without your consent. We have but one place for anonymous communications, viz., the waste basket.

CHARITABLE HOSPITALS NOT LIABLE FOR NEGLIGENCE OF NURSES.

"Dear Doctor: Referring to this excerpt from *Journal of A. M. A.* published in your April issue, p. 188, I deny absolutely the accuracy of the statement so far as the law of New York State is concerned. I cannot go into the matter in detail, but would refer you to the case of Helen Ward *versus* St. Vincent's Hospital, New York, in which the plaintiff, a paying patient, eventually obtained a verdict for ten thousand dollars. The actual ground of action was for negligence of a nurse in permitting the plaintiff to be burned by a hot water bag or bottle while the latter was in the post-anesthetic condition of unconsciousness. The technical cause of action was for breach of contract. The case dragged on for years and was tried three times—the third trial was in May, 1900. The astute counsel employed by the hospital did their duty remarkably well, and used every known technical device to prevent Miss Ward from obtaining damages. They failed, as they deserved to do.

"Actions similar to Miss Ward's have in a few cases been successful in England. Some lawyers profess to believe that as "private" patients do not have a contract with the trustees of the hospital in which they may be receiving treatment, no suit for damages can be sustained. 'Private' patients, these learned gentlemen contend, have a contract with their own physician or surgeon. This bizarre opinion is responsible for the rule at some hospitals that all 'hospital' patients must be anesthetized for surgical operations by a licensed physician, but that surgeons may employ any person they may choose to give anesthetics to 'private' patients. There is, however, no doubt that both in this State (N. Y.) and in England in some cases of negligence on the part of the trustees of a hospital a 'private' (paying) patient can successfully bring suit. A great deal must depend on the evidence, of course. For example, if the patient or the attending physician selects the 'private' nurse, the hospital is not liable for her negligence. A hospital is required to employ competent people, but what constitutes competence is obviously a question for a jury. If the patient or his physician requests the superintendent of a hospital to provide a registered nurse for a 'private' patient in a private room, and agrees to pay the usual price per week for the entire attention of that nurse, the probability is that in case of gross ignorance or neglect on the part of the nurse, an action for damages against the trustees of the hospital could be sustained. My recollection is that in Miss Ward's case the final decision was that as the plaintiff paid $25.00 a week for a private room, St. Vincent's Hospital could not evade trial of the action on the ground that as a charitable institution it could not be sued either for breach of contract or for negligence."

LAWRENCE IRWELL.

425 Porter Avenue,
Buffalo, N. Y.

Questions and Answers.

The following answers are not "official." They are prepared for the editor.

Vermont Board of Registration of Nurses.

MEDICAL NURSING & HYGIENE.

Examination At Montpelier, Vt., May 8th, 1913.

Answer ten questions. Number each question. Letter each subdivision. Do not write the questions.

1. State (a) the cause, (b) the symptoms of bed sores. (c) How prevented? (d) Give treatment in full.

Ans. (a) Bruising, pressure, moisture, uncleanliness and an uneven bed. (b) Redness and other signs of inflammation followed by blistering or abrasion which develops into a shallow ulcer. (c) Prevent pressure on bony prominences by changing patient's position often as necessary, or when this is impossible, by protecting tender spots by ring cushions, pads, pillows or dry dressings so arranged as to support the body comfortably without pressure on susceptible areas. Keep skin strictly clean by daily bathing with soap and water followed by rinsing and thorough drying. An alcohol rub and application of powder should be given often enough to keep the skin dry and healthy—every hour if necessary. The bed should be kept clean, free from wrinkles, bread crumbs or other sources of irritation. (d) Remove pressure, cleanse wound with antiseptic wash, powder liberally and protect with soft gauze compresses; change dressings as they become moist. Some surgeons prefer a dressing of zinc ointment retained firmly by adhesive. If sloughing is inevitable it must be favored by poulticing and the resulting deep ulcer must be treated in such a way as to favor free discharge and healing from the bottom; the details of this procedure are left to the attending physician.

2. What is (a) the normal temperature of the body in health? (b) What are the limits of temperature in health? (c) Where may temperature be taken? (d) How does it differ in these locations?

Ans. (a) 98.6 degrees Fahr. (b) 97.2 degrees to 99.5 degrees. (c) In mouth, axilla, rectum or vagina, groin. (d) Temperature of axilla and groin is usually about ½ degree lower than that of mouth; rectum and vagina about ½ degree higher than mouth.

3. Name the sequelae and complications of scarlet fever.

Ans. Sequelae: enlarged tonsils, deafness, mastoiditis, endocarditis, chorea, nephritis. Complications: sore throat, otitis media, rheumatism, synovitis, nephritis, myocarditis, bronchitis, pneumonia, delirium, meningitis.

4. How do typhoid bacilli enter the system? (a) By what mediums are they conveyed? (b) What precautions must a nurse adopt to protect herself and others in nursing typhoid?

Ans. Through the mouth. (a) Drinking water and water used for washing food and utensils, milk and other dairy products, ice, oysters, and any medium whatsoever that has been contaminated by a "typhoid carrier." (b) Disinfect all excreta from the patient, and all dishes and utensils used in care of patient, and all bedding, clothing, etc., coming from the sick room. Destroy all remnants of food and medicines as soon as removed from sick room. Observe strict cleanliness in all her work and wash her hands most carefully before passing from the sick room to any other occupation.

5. Give some of the "danger signals" in pneumonia crisis. (a) What treatment should be given at the time?

Ans. Rapid fall of temperature considerably below normal, great prostration, nose-bleed or other hemorrhages, edema, or other signs of weakening heart. (a) Heat externally, normal saline by hypodermoclysis or rectum, various heart stimulants or other restoratives as prescribed by the doctor.

6. Define (a) communicable (b) contagious (c) infectious disease. Give example of each.

Ans. (a) Capable of being imparted, as measles. (b) Communicable by direct or indirect contact, as gonorrhea. (c) Communicated by implantation of morbid agent from without, as typhoid fever.

7. Under what conditions are nutritive enemas ordered? (a) How are they given? (b) How often? (c) Give a formula for same.

Ans. When patient is unable to swallow, when gastric digestion is impaired, in operative cases where the upper part of digestive tract is temporarily out of use. (a) Give cleansing enema of salt solution if possible an hour before the nutrient enema. Patient lies in Sims position, hips elevated. A rectal tube with large glass funnel attached is lubricated and passed ten or twelve inches into the bowel. The nutrient fluid at temperature of about 95 degrees Fahr. is poured into funnel and allowed to enter rectum slowly. Patient must lie quiet for a half hour to prevent expulsion of fluid. (b) Every three to six hours, according to the amount given at one time, which may be from two to six ounces for an adult. (c) One raw egg and three ounces peptonized milk.

8. Give nursing treatment in detail for sudden collapse of patient.

Ans. Elevate foot of bed, keep warm by application of external heat to extremities, maintain circulation by friction of extremities under cover, give an abundance of fresh air or oxygen, give hot normal salt solution under skin, into the rectum or a vein. Stimulants may be given by mouth, rectum or subcutaneously. Electricity, a hot mustard foot-bath or mustard plaster over the heart may be used for stimulation.

9. Describe appearance of blood in hemorrhage from lungs. (a) Define nurse's duties in such an emergency.

Ans. Bright red, frothy and alkaline. (a) Keep patient very quiet in bed with shoulders elevated. Keep room cool and admit plenty of fresh air. Give ice to suck. Apply ice bag over chest if it relieves bleeding. Give no stimulants. Morphin is useful to quiet cough and allay excitement.

10. Give all the essentials of an ideal or hygienic sickroom.

Ans. To be well ventilated, well lighted by the sun, to have sufficient heat easily regulated, to be screened from flies and other insects, to be finished and furnished in simple and restful colors without extra furniture, ornaments or draperies, to be free from dust, to be free from noise inside and outside, to be clean.

11. What are the duties of a nurse when caring for a case of tuberculosis?

Ans. Sputum must be collected in covered receptacles or moist rags and burned before it can dry. Hands and face should be washed frequently, especially before eating or touching food. A cloth should be held before the mouth when patient coughs. Patient should not share his bed or bedroom with anyone else. All laundry from patient's body or room should be soaked in antiseptic solution as soon as removed, unless it is placed directly in a boiler. In cleaning the room some dustless method must be used. Room must be liberally supplied with fresh air and sunshine. Patient should be out of doors day and night if possible. Nurse should see that patient keeps clean, is well fed, warm enough, and that he rests when he is not in condition for exercise, according to the directions of the physician. Special care, suited to the case, is directed by the physician. The nurse must use every precaution to avoid infecting herself and others with whom she associates. She should wash her hands after caring for the patient and especially before her meals. She should never eat in the sick room. She should have a daily outing in the open air and should not wear the outer clothing that she has worn in the sick room.

12. What is (a) empyema? (b) Of what disease is it a sequel? (c) Give treatment.

Ans. (a) Pus in the chest cavity. (b) Pleurisy. (c) Surgery.

13. How can you determine if the air of a sickroom is fresh?

Ans. Breathe the outside air long enough to get accustomed to it. Then breathe the air of the sick room; if it has any perceptible odor it is not fresh. The proportion of carbon di-oxide may be ascertained by shaking a measured quantity of lime water with a measured quantity of the air of the room. This test requires special practice and is ordinarily too fussy for the nurse to apply.

MATERIA MEDICA AND URINALYSIS.

EXAMINATION AT MONTPELIER, VT., May 8th, 1913.

1. What are the names of weights used in the apothecaries table?

Ans. Grain, scruple, dram, Troy ounce, pound.

2. Define (a) expectorant. (b) Digestant. (c) Rubefacient. (d) Diuretic. (e) emetic. (f) Cathartic.

Ans. (a) A remedy that aids expector-

ation. (b) One that aids digestion. (c) One that reddens the skin. (d) One that stimulates the flow of urine. (e) One that causes vomiting. (f) One that causes evacuation of the bowels.

3. Give dose of Croton oil. (a) How best administered?

Ans. One drop. (a) Placed on the tongue with 5 drops of sweet oil.

4. Give (a) ordinary name of oleum tiglii. (b) Oleum Terebinthinae. (c) Oleum Ricini.

Ans. (a) Croton oil. (b) Turpentine. (c) Castor oil.

5. If Nitroglycerine gr. 1/200 hypodermically was ordered and you only had tablets gr. 1/100, how would you proceed?

Ans. Measure twice the quantity of water required for the desired dose and in it dissolve the tablet; administer one-half of the solution.

6. Name two emetics easily procured in any household.

Ans. Warm water, mustard.

7. What is indicated by the order, "Give Hydrargyri chlor, mite grs. ii t. i. d."? (a) What should be avoided in diet after?

Ans. Give two grains of calomel three times a day. (a) Acids.

8. What precautions should be taken in administering iron preparations? (a) Name some of the iron preparations used as medicine.

Ans. Avoid staining the teeth; give well diluted, through a tube. (a) Blaud's pill. Basham's mixture, reduced iron, tincture ferri chloridi.

9. Give usual hypodermic dose of strychnia. (a) Name two alkaloids of opium in common use and hypodermic dose of each.

Ans. One-thirtieth of a grain. (a) Morphin Sulfate, grains ⅛; codeine, grains ½.

10. How would you treat a case of poisoning by carbolic acid?

Ans. Wash out stomach with 25 per cent. alcohol and water. Apply dry heat to body. Give hypo of strychnin. If more stimulation is needed give adrenalin, 1/1000, intramuscularly followed with hypo of atropin. Give hypo of camphor in oil, repeated until effective. Give no oils by mouth, keep patient as quiet as possible, let him drink freely of milk, albumin water and starch water.

11. Give test for (a) acid; (b) alkaline urine. (c) Give a test for albumen in urine.

Ans. (a) Turns blue litmus paper to red. (b) Turns red litmus paper to blue. (c) Nitric acid, C. P., is "overlaid" with a small quantity of urine by pouring urine gently into an inclined test tube containing a few c. c. of the acid. If albumin is present it forms a white layer or "ring" at the line of contact of the two fluids.

12. What is spec. grav. of normal urine? (a) Give amount secreted in twenty-four hours.

Ans. From 1,010 to 1,030; usually about 1,020. (a) About 50 ounces, or 1,500 c. c.

VERMONT.

STATE BOARD EXAMINATION, Montpelier, May, 1913.

Obstetrics. (1) What do you understand by the term pregnancy? (2) What are the physical signs? (3) Define the following: (*a*) abortion, (*b*) premature labor, (*c*) extra-uterine pregnancy, (*d*) placenta previa. (4) (*a*) How many stages of labor? (*b*) Describe each. (5) How would you prepare a bed for labor in a private house? (6) What care would you give the breasts before and after delivery? (7) (*a*) What is the lochia? (*b*) What are the signs of hemorrhage? (8) What are the symptoms of eclampsia? (9) (*a*) What care should you give the eyes of the new born? (*b*) The mouth? (10) If alone, what would you do for secondary hemorrhage from the cord? (11) (*a*) What is the best food for babies? (*b*) Give temperature of water for first bath? (12) What is the danger of using a glass catheter during labor?

Surgical Nursing and Bacteriology. (1) Define strabismus, myopia, hypermetropia and ophthalmia neonatorum. (2) What is the safest method of removing a foreign body from the ear? (3) Define fracture, ecchymosis, gangrene, abscess. (4) Define antiseptics, germicides, deodorants. Name one of each with indications for its use. (5) Classify bacteria according to shape. What conditions are necessary to their growth? (6) Define spore, parasite, saprophyte. Name two spore bearing bacteria. (7) Describe in detail the various steps in catheterizing a female patient. (8) Name and describe uses of five positions of patient for operation or treatment. (9) What is cystitis? (10) What becomes of a silk ligature left buried in the tissues? (11) Define hemorrhage, shock, coma, asphyxia, syncope. (12) Name four purposes for which enemata are administered.

Have your answers to these questions ready for comparison with the answers to be given in a later number of the GAZETTE.

TECHNICALITIES.

ITEMS of value to nurses in their work will be welcome to this column.

A NEW METHOD FOR PRESERVING EGGS.—The Indo-Chinese have such a good method of preserving the eggs of their hens without any special precautions or cold storage-packing that they do not deteriorate during long voyages. This result, says the London Standard, is obtained by covering the eggs with a layer of paste made with water, sea salt, and vegetable ashes. The eggs are covered over regularly with a layer of half a centimetre or a centimetre thick, and are then put to dry. After having been completely dried, the eggs are simply piled up in a dry place, and they will keep in good condition from one year to another. When they are to be used they are placed in water. The saline covering is dissolved and the egg is ready to be consumed. But owing to certain osmotic exchanges which take place through the porous covering formed by the shell, the eggs thus preserved are extremely salt. Not only is the sea salt diffused in them, but the alkaline carbonates contained in the vegetable cinders also add to its action. It is, in fact, this which ensures the preservation of the eggs for such a long time. And it is indispensable, as is done by Annamites, to use the eggs thus prepared as a kind of condiment which, when mixed with a large proportion of rice, serves both as a sauce and seasoning.—*Exchange.*

RECTAL ALIMENTATION.—With rectal enemata a very considerable amount of nourishment can be introduced into the body, especially as the present state of surgery makes it only a temporary measure. Water is easily absorbed; sugar, especially grape sugar, very readily, as are the salts There is very little absorption of fats; peptonized proteid foods, such as somatose and powdered casein, are absorbed in sufficient quantities to maintain a nitrogenous equilibrium, for a short while at least. Water alone, as enema, can supply the body needs for as long a period as is usually required: these injections do not call forth the flow of gastric juice which an ordinary nutritive enema does, and therefore are better for an ulcerous condition of the stomach.—*Lancet.*

SHUN FLIES.—You take fearful chances in a flyful restaurant.—*Chicago Sanitary Bulletin.*

CASSEROLE COOKERY.—Cooking in stoneware, or casserole cooking, is now coming more into favour in England. It is one of the oldest methods of preparing food, and there is no doubt that property was used for culinary purposes long before the adoption of metal. The peasant woman in France has for centuries cooked her beef and *bouillon* in stoneware, and no French cottage would be complete without its *pot-au-feu mormite* bubbling on the hearth. If the English poor could be persuaded to use similar methods for their cooking it would undoubtedly benefit both health and physique, and as a result there would be a smaller demand for vacant beds in the hospitals. The economy of this method of cooking is apparent. Firstly, it reduces the consumption of fuel or gas; the temperature certainly has to be high at first, but it need only be maintained at that degree for five or ten minutes, after which it can be reduced considerably. Secondly, it saves time and labour; the work in the scullery is lessened as regards the washing up and time is saved in dishing up, for the food can be served in the same vessels in which it has been cooked; all that is required is a serviette neatly folded round the casserole. For braising and stewing, cooking in stoneware has no equal and it is certainly excellent for making good beef-tea. Very little attention is required in cooking: an occasional stir, or a few seconds' basting is all that is necessary. Fire-proof crockery is very inexpensive to buy, and the casseroles can be used for a long time.—*Hospital.*

LEAVE THE CORNERS.—The bad habit of trimming its corners is responsible for many cases of ingrowing toenail.—*Amer. Jour. Surg.*

BAD AIR MAKES BAD DISEASES.—Pneumonia and tuberculosis are diseases chiefly of improper house conditions—of impure house air. Pure air is your best protection against diseases of the respiratory organs.—*Chicago Sanitary Bulletin.*

BRIGHTENING OLD HYPODERMIC NEEDLES.—Hypodermic needles, which have become useless on account of being clogged, may be renewed by boiling in a solution of washing soda for a few minutes. This not only opens them up, but brightens them as well.—*Od Quarterly.*

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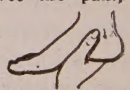

Coward Arch Support Shoes are of special assistance in treating arch and ankle weakness of growing feet, and are as efficacious in preventing the foot troubles of childhood as in their treatment and correction.

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TECHNICALITIES.

IODINE AND OTHER MEDICINE STAINS.—If iodine or other medicine stains are washed immediately with naphtha soap and warm water, they can usually be removed quite easily. If the stains, however, are allowed to dry they should be dissolved with either ether, alcohol, or chloroform before washing with the naphtha.—*Hospital.*

EXIT THE STRUT.—The continental army officers, especially the German, had for years held up the "pouter-pigeon" type of men as the ideal to be striven for. The medical army officers are drawing attention to the fact that continuous raising of the chest wall leads to contractures of the muscles involved, to be followed by emphysema, dilation of the right heart, hypertrophy of the left heart, and so a chain of endless pathology had been set up. The result was decreased efficiency in the army and navy, and the flower of European manhood badly crippled for life. The American soldier when he donned the khaki and put away the blue coat and plumed chapeau, also discarded strutting about like a pouter pigeon. —*Lancet-Clinic.*

DISINFECTION OF TYPHOID STOOLS.—Cover with water at 50-60 degrees C. (122-140 F.) Add a cupful of quick lime, let stand 1½ hours. The U. S. P. H. S. declares that this developes enough heat to sterilize completely.—*Buffalo Medical Journal.*

ANTIDOTES FOR CARBOLIC ACID.—A common antidote for carbolic acid is alcohol, but common cider vinegar is equally good and often more handy. Externally in full strength it restores the functions of the skin, and removes soreness; internally, diluted one-half or two-thirds, it is to be slowly administered in teacup doses.—*Od Quarterly.*

ABSOLUTE (?) TEST OF DEATH.—Icard of Marseilles advises injecting a solution of fluorescin. If there is the slightest blood current, the body becomes a vivid golden yellow, the eyes a deep emerald green. Half an hour is long enough for the test. In death, there being no circulation, the dye is not diffused. The test is harmless if life is present, as the dye is quite rapidly eliminated.—*Buffalo Medical Journal.*

GOLF-BALL BURNS.—H. Lowell, of Boston, reports four recent cases of injury to the eyes of children from the liquid contained in golf-balls. Only one of the cases escaped permanent injury and practical loss of sight of one eye. There are apparently two makes of golf-balls each containing a different, highly caustic substance, which squirts out when they are perforated or burst. Analysis of one kind showed a content of a mixture of barium sulphate, soap and a free alkali. Another kind has been found to contain zinc chloride.—*Jour. A. M. A.*

THE RECOVERY FROM TYPHOID.

In spite of the improvements in general sanitation, typhoid fever still continues to exist, and is especially prevalent during the fall and early winter months. It is more than probable that most cases occurring in the larger cities are the results of infections contracted at the summer vacation resorts, where the water and food supplies are not as carefully safeguarded as in urban communities. Although many forms of treatment, designed to abort or cut short the disease, have been advocated from time to time, it is indeed doubtful whether such regulation of the infection has ever been accomplished. As the average course of Typhoid is from four to six weeks, it is scarcely to be wondered at that the patient usually emerges from the attack in a generally devitalized condition. This is accounted for not only by the general toxemia incident to the bacillary infection, but also because the practically exclusive milk diet generally adopted deprives the patient of the natural food iron which ordinarily maintains the ferric sufficiency of the blood. Some degree of anemia is therefore almost always in evidence when convalescence is first established. The quickest and safest way to overcome this blood deficiency and to hasten revitalization and a return to the normal, is to give Pepto-Mangan (Gude) regularly and in full dosage. This thoroughly agreeable and acceptable hematic tonic is particularly serviceable in typhoid convalescence, because it does not irritate or disturb the digestion, nor induce constipation.

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